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DO THE CYCLE-SHOWS PAY?

NO doubt the utility of the big cycle-shows will be widely and thoroughly discussed before the season for holding another reaches us, and the question is one in which not a few rubber-manufacturers are directly interested. Already there is a lack of unanimity in the sentiment respecting the merits of these exhibitions. It has been suggested in more than one quarter that the retardation of the bicycle trade for a certain period of each year—the period of waiting until the shows open—is not more than compensated for by the benefits of the shows when they occur. Again, it is urged that, as the bicycle is no longer a novelty, and as abundant facilities exist in every city and village for interested persons to become fully acquainted with the features of the various wheels, it is unnecessary to incur the heavy expense of holding the annual shows in New York and Chicago. But a still more important question is whether these affairs are of any real direct benefit. Without doubt there were both rubber men and bicycle-manufacturers at the two recent shows who participated under protest—feeling that it would not profit them, and yet hesitating to seem unprogressive by not keeping pace, so to speak, with their competitors.

Apart from any of the considerations here noted, there has appeared in these exhibitions of late a feature which is a sure sign of their decadence as *bona fide* business enterprises. As a correspondent writing to us of the Chicago cycle-show expresses it, "the bloomer girl, dwarfs, Indians, and other freaks were too much in evidence." Certainly such things do not aid in the sale of good bicycles at fair prices, and this is the prime object of any bicycle show that is worthy of the name. Referring to the same exhibition, a writer in *The Bicycling World* says:

> The souvenir fiends were out in full force, most of the crowd seeming to pay little or no attention to the merits or appearance of the wheels shown, being absorbed in the collection of the various novelties given out by the lavish exhibitors. It was an interesting study to observe the movements of this genus of the "I-want-everything-I-can-get-for-nothing family," who in nine cases out of ten belonged to the feminine sex. Towards the latter part of the week, when the supply was nearly exhausted, the persistency of these females was a source of the greatest annoyance to the exhibitors, who, when talking to prospective buyers, were besieged by some clamorous woman begging for a souvenir.

The Chicago show is mentioned here for no invidious purpose. It was no better last month at Madison Square Garden. We may go farther, and say that the same tendency is becoming apparent in so-called popular exhibitions everywhere, whether of bicycles or of the industrial triumphs of nations. Sir Henry Truman Wood, one of the British commissioners to the late World's Columbian Exposition, who saw in the "Midway Plaisance" Paris of 1889 outdone in catering to the mere curiosity-seekers, has publicly expressed his doubt whether the projected great French exhibition of 1900 will prove of any practical benefit to the world, because of the almost certain predominance there of features which will have no sort of connection with industrial progress or artistic development.

The trouble is that the organization of great exhibitions

—and smaller ones as well—has come to be based upon the mistaken idea that they are failures if they do not "pay expenses." Hence the first and last effort is to attract vast crowds, regardless of their character. Manifestly, if the bicycle-show is meant for exhibiting the merits of bicycles and encouraging their sale, this object is interfered with rather than promoted by the presence of crowds intent only upon carrying away free canes, pins, and buttons of greater value than the cost of admission.

If the bicycle firms want shows for business ends alone, the matter of gate receipts is the last one that ought to be considered. First should come the question, "How much can I afford to spend for exhibiting in a suitable hall my wheels to possible buyers?" and then the subscription of the amount, simply as an item of advertising. If the gate fees—which should be meant chiefly to exclude the element which always flocks to a free show—help to reduce the expenses, so much the better. But the advertiser in a newspaper expects to be recouped from the profits on his increased business, instead of looking for the return of his money through some catch-penny scheme connected with the newspaper. The same policy is the only sound one to pursue with regard to the exhibition of bicycles or any other products of industrial skill.

THE HARMLESS CHEAPENING OF RUBBER GOODS.

BY EDWARD F. BRAGG.

THERE is among all American manufacturers a growing tendency to complain that competition becomes closer and the margin of profit in their particular line shows a constant lessening. The manufacturer, particularly if he make medium grade rubber goods, tries to meet this by renewed efforts to cheapen his costs. He does this by substituting cheaper raw materials which enter into the compounds. This most certainly produces cheaper goods, not only in cost but also in their real value, ultimately injuring their sale and the reputation of their maker. This latter fact has been all too fully proved by the experiences of makers of the poorer grades of goods who have at times had in a single season thousands of dollars worth returned which were made up from some new compound because at first it was cheap. This is unsuccessful competition, alike to producer and consumer. Successful competition which is beneficial to the consumer, has a decided influence in bringing out superior appliances and bettering as well as cheapening manufactured goods. It also shows clearly to whom credit belongs and tends to the building up of reputations of great value. Any cheapening of production due to improved processes or machinery is not open to any of the risks or objections found in cheapening materials but gives the manufacturer just so much the advantage over his rivals.

Not only is the quality of his goods not necessarily lowered but, on the contrary, he can make just as good an article for a less price. In many cases he even improves their quality, workmanship, or style by superior handling. This kind of progress means success. It is highly important to the manufacturer that he adopt new improvements just as soon as they have been proved to be really of value. All improvements in machinery are gradually discounted to the trade, and the public eventually receives the benefit as is shown in the inevitable tendency for all articles to lower in price from year to year. If the improvements are adopted at once, after their value has been demonstrated, the manufacturer reaps the benefit for the few years before it is finally distributed to the general public through the power of competition. If he delays till that time arrives, he must then adopt it, minus the profits of the past, in order to avoid a continuous loss. Among the most striking improvements taking place at the present time are the increase in speed, or size, or both, of the older types of machinery and in the building of new types to take the place of hand work. The former has the effect of one new machine taking the place of several old ones; saving in room, foundations, connecting machinery, and men necessary to operate. The latter saves directly in cost of labor displaced.

To be sure a high speed shortens the life of the machines but in most cases this is no disadvantage when the present rate of improvement is considered. They will probably last as long as it will pay their owners to use them. In a few years something better will undoubtedly be put upon the market and it is far better to get the value of the machines several times over in increased efficiency and then throw them away, than to be the owner of much slower moving machinery in fairly good condition, too good to throw away, and far too much out of date to be worth using.

Another method of improvement is in the doubling up of several machines in one, as in the double friction calender where both sides of the cloth are frictioned in substantially one operation. In the new soling calender so arranged that while one engraved roll is in use another can be put in on the opposite side of the machine ready to change over to another pattern without loss of time. In the new tubing machine which will make three or more tubes instead of one as in the old style. The large increase in size as well as speed of some of our newer calenders, making it possible to run much wider fabrics is also a step in the right direction, for the maker can use greater economy in cutting up his goods.

Very many other cases might be mentioned, but for the purposes of this article these are sufficient to show that the tendency is all in this direction and that many of the rubber manufacturers are fully alive to the situation. The more successful the manufacturer, the more of the latest improvements one is sure to find in his factory.

THE HODGMAN PNEUMATIC TIRES.

THE news that the Hodgman Rubber Co. were equipped to make pneumatic tires has been discussed in the trade for some weeks past and the unanimous verdict has been "well there is no doubt but they will make good ones." That this statement is deserved few will contradict and yet it is doubtful if many are able to tell just why this particular company have unusual qualifications for turning out good tires from the very start. The whole secret lies in the fact that the pneumatic is a problem that belongs to that portion of the rubber business known as air work. A domain where the ordinary rule-of-thumb methods are valueless, and where care, experience, integrity in workmanship and material,—nay where India-rubber genius is a prerequisite to success. The Hodgman Rubber Co. have this for they are noted as the most successful makers in the world, of air work that is without fault. The tires that they are to turn out,—or more accurately that they are now making, are single-tube, moulded tires, and are known as the "Hodgman" and the "S. R. W." They weigh 3½ pounds to the pair, for the former, and about 4 pounds for the latter, the difference between the grades being a difference in fabric. In both of them, materials, workmanship, and unusual skill have combined to bring out a wonderfully perfect article. In fact, the proof of its perfectness is that the makers are giving it their own name, which is a synonym for all that is excellent in rubber.

THE USE OF PURE-GUM BANDAGES IN SURGERY.

*By Lieut.-Col. Henry A. Martin. A. M, M. D.**

I CALL the bandage "the strong elastic bandage," and not Esmarch's, which it somewhat resembles, because I was making almost daily use of it very many years before Esmarch made the discovery and published the great improvement in practice which has immortalized an already illustrious name. I make no claim whatever to Esmarch's discovery, although very many years ago I twice made suggestions to surgeons, about to amputate legs, which, if regarded, might have led to that discovery. The suggestions, however, were not regarded, I being at the time a young physician. Indeed, I felt theoretically sure that such a bandage could not arrest the deep arterial circulation in a limb, so sure that I never took one of my banpages to try the simple experiment which would have developed the very important discovery that it easily can and does arrest it. The history of our art is largely a history of being satisfied with nice theories, and shirking the simple practical experiments which, when made, fill the world with wonder that they were not made long before.

For many years I have, with unvarying success, treated all forms of ulcer of the leg by the application of a bandage of what is known as "pure rubber." The length of this bandage is ten and a half feet, width three inches, and thickness of No. 21 of "Stubs' wire gage." Into one end two or three inches of strong cotton cloth is inserted, and to this is firmly sewed a stout double tape eighteen inches long. It is important that the edges should be perfectly even. If there is the slightest notch in them, the bandage will be very apt to tear at that point and become useless. If, however, it be properly cut, it will bear almost any amount of continued traction. This even cutting can only be done properly by machinery. When I began to experiment in this method of treatment I attempted to cut the bandages from the sheet rubber with strong sharp shears, but I found it impossible to cut them with sufficient accuracy. All my bandages are now, with the exception of attaching the tapes, made at an India-rubber factory, and it is astonishing how long one properly made will wear. Many of my patients are wearing them every day, and have done so for two, three, even four years, and I have cured several poor patients' ulcers with a single bandage which is still perfectly serviceable.

To insure durability the material must be the best Pará rubber, prepared with the minimum of sulphur and heat needed to effect that curing of the gum. The dimensions given are those which I have found most generally applicable. If a leg is very long and large, an addition of two or three feet in length, and of half an inch in width, may be desirable. If the leg is very slender, there will be somewhat more bandage than is necessary; this, however, can be wound round below the knee, or, of course, cut off to suit the exact requirements of the case. After being in use for a short time they improve in appearance by getting rid of the sulphur, which, to use a technical phrase, "sweats out" of the rubber. This sulphur is not at all objectionable except in appearance; indeed, I think I am not fanciful in believing that, in certain conditions of the skin, it exercises a decidedly beneficial effect. The sulphur could be removed and a much nicer looking article produced, but this could only be done by certain chemicals, which would probably injure the rubber. Now and then I use a bandage for a child or even infant, and, of course, a narrower and shorter but not thinner one is needed. For diseases and injuries of and about the joints, bandages of very varying length, and generally wider and of greater thickness, are required, according to the amount of support and resistance to the undue motion of the joint which is sought after. I have described the bandage rather minutely, perhaps, for so very simple a matter; but I am anxious that those who test the merit of the practice I commend should do so fairly, and that there should be no room for mistake. One word more, the thickness is what I have found after many variations and trials to be exactly right. If thinner, it would not fulfill desired ends, and if thicker it would be unnecessarily clumsy and heavy, and much more apt to slip down unless a degree of traction should be made and pressure applied beyond what is desirable.

I need not detail the steps by which I arrived at the knowledge that no other application is needed for the treatment of all ulcers of the leg of a non-specific character which are at all in the category of curable by any method, while many not really curable by other treatment have been found to yield easily and perfectly to this. I first used the rubber bandage as a substitute for the "roller," usually applied over Baynton's strapping. I soon dropped the strapping and substituted various salves and lotions. At last I discovered that the bandage alone is all that is requisite, and that without the slightest interruption of the patient's business or way of life, without the necessity of an hour's rest or change of position. Indeed, during the whole time that the patient wears one till the complete cicatrization of the ulcer, he is much more comfortable and able to work or exercise than before its application. If not a means of cure, it is valuable as a palliative, particularly in that very large class of ulcers complicated with a varicose condition of the veins.

When it is considered how very large a proportion of cases of ulcer of the leg occur among hard-working people, dependent on daily labor for daily bread, how impossible to successfully treat many of them without rest and recumbent position, and how out of the question it generally is for such patients to take the time needed for treatment, it seems to me that the value of the simple method I propose cannot easily be overestimated.

The form of ulcer which yields most perfectly and readily to this treatment is that very common one connected with a varicose state of the superficial veins. It is well

* Reprinted from "Transactions of the American Medical Association."

known how unsatisfactory all previous methods have been in this class of cases, how next to impossible to obtain firm sound cicatrization of such ulcers without a very long continuance of the horizontal position, and how extremely liable they are to return, at the slightest provocation, when the erect position is resumed. The ulcers found on old, poorly nourished legs, where there is a deficiency in the quality or quantity (generally both) of the blood, a feeble heart, imperfect circulation, and, consequently, a wretchedly nourished skin yield the least readily, but still are healed by this method more speedily and much more solidly and enduringly than by any other.

I need occupy but little space in describing my way of using the bandage, for nothing can well be simpler. The patient is directed to put it on the first thing in the morning, before the veins of the leg become distended by the impeded column of blood within them. The very best way is to apply it while still in bed. It should be applied with just snugness enough not to slip down. The moment after the foot is put to the ground, the limb is so increased in bulk by the increase of blood in its veins, that the bandage becomes of precisely the proper degree of tightness, and, no matter how active the exercise or labor of the patient, it will remain in position all day. It is applied by winding one turn just above the malleoli, then one around the instep and sole, then up the leg, spirally, round and round, to the knee, each turn overlapping that below it, from one-half to three quarters of an inch. If there is any redundant bandage, it can be wound round the leg below the knee, the tapes carried in different directions and firmly tied. When the patient undresses at night, it is to be removed, and the limb wiped dry; a piece of soft old linen moistened with olive oil, or some equally simple dressing, laid on the ulcer and retained in place by a few turns of an ordinary roller. The rubber should be sponged with water and hung over a line to dry, in readiness for the morning; or it can be wiped dry at once, and rolled up with the tapes in the center. Such is the dressing for the night; in the morning the leg can be washed, but, whether it is or not, all traces of oil or cerate should be carefully wiped away, as contact with the bandage of any fatty matter would tend gradually to injure the rubber.

This is the whole treatment. Rubber bandage all day, with erect position and exercise. The simplest possible dressing (merely to protect the ulcer from injury), with the horizontal position and rest all night. When the bandage is removed at night, it and the leg will be found to be bathed in moisture. That part of the limb to which the bandage was applied has been all day kept warm, moist, and perfectly excluded from the air, in an atmosphere and conditions the most favorable possible for the processes of granulation and cicatrization. In addition to this, a gentle, continually maintained, and even pressure has supported the distended and weakened vascular coats, and prevented that venous turgescence which is the cause, in many ulcers, of mal-nutrition of the skin, the sole reason why nature's ordinary processes of repair are impeded and prevented. In those cases where no varicose condition of the veins exists, but in which an imperfect and feeble nutrition of the skin is the *raison d'être* of the ulcer, where nature is unable to heal the slightest scratch, and the most trivial contusion rapidly changes into an indolent ulcer, with white, elevated, leathery edges, the bandage, by the warmth and moisture induced by its application, favors the circulation in the capillary vessels, and a determination of blood to the surface. The constant pressure is at once a stimulus to the process of granulation, and to the rapid absorption of the hard edges, the removal of which, in some way, is a necessary antecedent to cicatrization. During the first week or two, and, in a few cases for even nearly three weeks, an eruption appears under the bandage, sometimes of few, sometimes of many papules, running very rapidly into suppuration. Each of these indicates an obstruction in one of the cutaneous follicles. The bandage is their best possible treatment, for the moisture softens the indurated secretion, washes it away, or favors the rapid suppuration by which nature accomplishes the same object, and the skin of the leg, subjected to a daily and all-day Turkish bath, becomes entirely clear of all obstruction, and so continues, however long the bandage may be worn.

During the past twenty-five years I must have treated at least from six to seven hundred cases of ulcers of the leg in this manner, and all, without exception, have been perfectly and absolutely cured.

The great aggregate of cases which I have treated by this method during so many years includes every variety of ulcer commonly seen. In the first one to two hundred cases, I employed other treatment with the bandage, but, for the last fifteen years, I have constantly used the bandage alone in all ordinary non-specific ulcers, and with the most gratifying and complete success. I repeat this, for I wish to impress the reader with something of my own estimate of the value of the method. My custom is, when a patient comes from a distance, to apply the bandage, give the directions as indicated above, and tell him or her, if the ulcer is not well in one month, or evidently getting well very rapidly, to come again and get any further advice that may be necessary *gratis*. In not a single instance have I ever seen one of these patients again, as a patient; now and then one returns to report himself well, and to bring a friend for treatment. In this way, and principally from the large manufacturing towns and cities, have I treated so large an aggregate of cases. Patients who stand all day at the loom become very liable, at and after mid age, to ulcer of the leg, very often a *sequela* of a long-continued varicose condition of the veins, and, consequently, I have had a great many patients from the great woolen-mills at Lawrence and elsewhere.

An apprehension has often been expressed of œdema of the foot, as a consequence of applying the elastic bandage. Such fears are needless. If œdema appears, it is because the bandage is on too tightly; applied with the degree of closeness I have indicated, it does not stop the circulation in the veins, but, by supporting the walls of the distended tortuous vessels, faciliates the passage of the blood through them, and, in this way, not only does not produce œdema, but rapidly removes that which often, to a certain degree, complicates ulcer of the leg.

Another and very important point is that of wearing the bandage after an ulcer is quite well, as a preventive of its return; many of my patients do this continually by preference, even when not directed to do so. I advise all whose occupation tends to aggravate a varicose condition of the leg to wear the bandage while standing, both for palliation of the symptoms of the varicose veins and as a preventive of the return of ulcer. Other patients are directed to wear the bandage when obliged to be much on the feet, or if there is the slightest irritability or redness at the seat of former ulceration, indicating a possible tendency of breaking down of cicatricial tissue. This is a most important point.

Next to its utility in cases of ulcer of the leg, I consider the elastic bandage of great advantage in certain injuries and diseased conditions involving the joints, and particularly the knee and ankle. The cases usually called sprain of a joint, consisting mainly of injury or even rupture of one or more of its ligaments, give a great deal of trouble to patients, and very often lead to serious and destructive disease. The ordinary treatment by liniments, anodyne, stimulant, corroborative, etc., is certainly not very fertile in brilliant results, and, in a very large proportion of cases, is the most irrational and fruitless treatment possible. How rubbing the outside of a joint with any liniment, or painting it with tincture of iodine of any strength, can in any way strengthen it, or repair an injured or broken ligament, is very difficult to conceive. The end to be attained, if possible, is rest to the injured part till nature can restore it. The method of applying splint and bandage, or, better still, a plaster of starch bandage, by which the joint is fixed and kept from motion, does attain this, and at a great price, in loss of time and exercise, and is very apt to lead to a very decided stiffening, sometimes to a degree permanently impairing the usefulness of the articulation. The joint is also weakened through want of exercise, by an atrophy of its ligaments and of the muscles of the limb from disuse. The strong elastic bandages wound round a joint affords a constantly present substitute, externally, for the ligament or ligaments temporarily disabled. The constant pressure induces a rapid absorption of exudation among the tissues about the seat of injury, and the gentle equable warmth and moisture, which always accompany its application, have a most favorable effect in alleviating and preventing inflammation. The great advantage of the elastic bandage in these cases is best seen after their most acute stage, but I now always apply such a bandage soon after injury and often it is the first and only application. I not only permit patients, suffering from injury or weakness of the knee or ankle resulting from previous disease, to take exercise, but urge them to do so, as a means of restoring the injured joint to its original strength. The one thing to be borne in mind is that the bandage is a temporary substitute for the injured ligament or ligaments; to take the place of these, and so permit them to have that undisturbed rest which is absolutely essential to their perfect repair. The application of the bandage must, therefore, be so made as to support the joint in such a way as to prevent motion to an extent or in a direction which would apply extension to the injured ligaments. There is some difficulty in explaining in words the exact way in which the application of the elastic bandage is best made to a knee or ankle, one or more of the ligaments of which are elongated, weakened, or sensitive from disease or injury, but a single application in such a case will make all this clear. Take, for instance, a sprained ankle. There is a want of strength and control of the joint; it is very easily "turned," in the direction in which it was thrown by the original injury. This, if extreme, violently extends the ligaments already injured, increases their sensitiveness, stretches and weakens them still more, and possibly even completely ruptures tissues which, before, had been only strained. The bandage, one, two, three, or more turns of which surround the joint, affords a firm, strong, constantly resisting and resilient force to prevent extreme distortion, and still permitting the natural motion of the joint to a sufficient degree. That lateral motion which does not exist at all, or only to a very limited extent, in a healthy ankle, and is only rendered possible by the rupture or stretching of certain ligaments, is prevented or sufficiently limited. Injury has weakened or broken the strong bands which bind the bones together and limit motion in a certain direction beyond a certain point. Art must supply a means to replace, for a time, these injured structures. The elastic bandage does this in the best possible way. Sometimes the foot can be moved freely and painlessly in any direction but one. It will be found that, perhaps, one little ligament is injured, and any motion of the foot is painless but that particular motion which exercises traction on that. I know no way but by the use of the elastic bandage that such a case can be successfully treated without a fixed apparatus. I have treated many cases of sprain or subluxation of the knee and ankle as I have indicated with perfect and speedy success.

* * *

[So many cases of varicose ulcers appear among operatives in rubber factories that the foregoing article was called to our attention by a prominent rubber man with the request that we publish it. Want of space compels us to leave out much that was of extreme interest, but the extracts given should be of value. Dr. Martin's discoveries are not by any means new, but they are known chiefly to physicians, and hosts of sufferers who might be helped are ignorant of the curative properties of India-rubber bandages. In addition to the diseases named in the article, remarkable success has been attained by the use of rubber in the cure of affections of the skin, injuries of the bones, erysipelas, rheumatism, neuralgia, etc.—THE EDITOR.]

IT is said that English vegetarians have determined to find a substitute for leather shoes, as they believe it is not consistent to wear anything made from animal matter. They have gone so far as to offer a prize of $50 for the best pair of satisfactory boots made without animal substances, and it is said that a test will take place before the Congress of Vegetarian Federal Unions in London shortly. It would be an excellent idea and a bit of education to those cranks also for one to go there with a pair of rubber boots and demand that $50 prize.

THE GROWING RUBBER TRADE OF BALTIMORE.

Special Correspondence of "The India Rubber World."

BALTIMORE, owing to its happy geographical situation, is rarely disturbed by serious or violent weather phenomena, and her trade has enjoyed a similar immunity from calamities such as are common to large business centers. This laudable condition of affairs, so far as it refers to trade, is due mainly to the sound judgment and conservatism of her business men.

For credit, she heads the list of all the greater American cities, and is proud of her record of having comparatively fewer failures, year by year, than has been the lot of her less fortunate sisters.

A review of the year 1895 records tales of hard times throughout the length and breadth of the land. Baltimore too has suffered with the rest, but emerges from the ordeal rejoicing over the fact that she has not lost prestige, but has to her credit a net increase in clearings of nearly $25,000,000.

It is evident, after careful inquiry, that the rubber trade in this community has prospered. In no instance has there been a falling off or standstill, but everywhere is noted a healthy increase in sales.

The traveling men of all the houses have kept the stock clerks busy in getting out their orders, and the only complaint seems to be the absence of the usual duplicate orders that were expected along about the first of the year. This state of affairs is beyond a doubt solely attributable to the unprecedented mild and open winter.

There is expressed on every hand a hope for "weather." One heavy snow throughout the middle and western states, and rain in the south, would add thousands of dollars to the profits of the jobbers and put them in the best of humor. Such an occurrence would be felt at the factories, too, for nearly all the houses are deplete in stock, having made heavy shipments early in the season.

As an important rubber-goods market, Baltimore takes second place only to Boston, and her trade is rapidly growing. During the last five years her trade has increased more than ten times, and several new houses have come into existence. Many of the heavy southern and western buyers, on their way east, stop here and purchase their entire stock of rubber goods, and then pass on to buy their other lines elsewhere.

No industry has a firmer or more promising footing in Baltimore than the rubber business, and great things are expected of it in the future.

There is a noticeable decrease in the sales of fancy, high priced mackintoshes, but this is offset by a comparatively greater increase in the sales of cheaper grades.

This ought to be but a temporary change, consequent upon the financial condition of the people. Several dealers will make renewed efforts to push fine lines the coming season, and they feel sanguine over the probable outcome.

It is a remarkable fact that hard times stimulate the rubber boot and shoe trade. This is not difficult of explanation; the fact is that poor people frequently buy rubber shoes to cover the defects of their leather ones. Also as frequently as a matter of economy, to make them last.

The mechanical rubber-goods trade is being rapidly divorced from the boot and shoe trade, and before long, it will be a separate industry. With the advent of electricity it has grown enormously, and now all hardware jobbing houses, as well as electrical-supply houses, carry stocks of no mean proportions. The recent removal of the tax on water hydrants has been a great benefit to the rubber-hose trade. A few years ago where a hundred feet of hose were sold now a thousand are sold. This suggests to dealers in cities where such a tax exists an opportunity to do some political maneuvering.

The trade visited, and in many instances wholly controlled, by Baltimore dealers, takes in Pennsylvania, Ohio, Indiana, Illinois, and the whole of the south and southwest. In one instance trade is being developed on the Pacific coast with marked success. Beyond this case there seems to be no concerted disposition upon the part of the jobbers to gain footholds in new territory.

There is a very spirited agitation in trade circles over a proposed exposition to be held next year in commemoration of the hundredth anniversary of the incorporation of Baltimore as a city. Opinion seems evenly divided as to the probable benefits such an affair would accrue to the trade. Yet all are patriotic enough to lend the scheme their hearty support, taking chances that it will be for the good of the city, and indirectly to their trade. Many of the firms have subscribed for stock of the exposition company, and representatives of the large eastern mills will urge their respective companies to have exhibits if the scheme goes through. This is merely noted to show the united progressive spirit of the Baltimore houses, even if it may question their judgment.

Another notable feature of the season's business which is very gratifying to the rubber dealers is the readiness with which the southern buyers are paying their bills; if as much could be said of those in the west, there would be a feeling filling the hearts of the trade bordering on bliss. It is safe to say that not more than one half of 1 per cent. of the sales of last year have been lost.

C. W. Linthicum, United States Rubber Co., is still domiciled at No. 28 Hanover street. He has charge of a large and important territory, and visits the jobbing trade in the middle and central western states and the south and southwest. He has great faith in the future of Baltimore as a rubber market. He says the demand for rubber goods in his line is steadily on the increase, and gives Pennsylvania, West Virginia, and Ohio as his banner states.

Messrs. Boyd, Jones & Co. are perhaps doing the heaviest business of any of the Baltimore houses. Holding forth at No. 22 Hopkins place, they are in the very midst

of the great wholesale district. The ever genial "Harry" Jones reports trade as very good, their house having done over 33⅓ per cent. more business in 1895 than in 1894; in fact, the largest in the history of their house. Were it not that mackintoshes have been greatly reduced in price, they would have doubled last year's trade. They have now a force of eight traveling men, who cover the entire southwestern territory. Mr. Jones thinks the prospective exposition will be a benefit to the city; his firm is doing all they can to foster the project, having subscribed largely to the stock of the exposition company. The Boston Rubber Shoe Co. and the Fairfield Rubber Co. have made no mistake in placing their interests in the care of such enterprising men.

Anyone visiting the establishment of McDonnell, Payne & Co. will not be long in finding out the meaning of the term "southern hospitality." It is a positive pleasure to go there and be accorded such a welcome as they invariably give. They are comparatively a new firm, having been in business about three years. About six months ago they changed their location from No. 16 West Baltimore street to No. 26 Hanover street, in order to be nearer the center of the wholesale district. Mr. Eugene McDonnell is the financial member of the firm, while Messrs. George H. Payne and P. T. Fogarty are the practical and experienced rubber-men of it. Their business shows a heavy increase over last year, and has tripled itself since their beginning. They have seven travelers covering a large territory. They are reaching out in new fields, and are sending goods as far west as Montana. They report fewer failures and better collections for 1895 than in 1894, and have very sanguine expectations for an increased trade this year. Their specialty is the "Mermaid" brand of mackintoshes—their private brand, which has become very popular.

Perhaps the most widely-known and oldest member in point of service and experience, in the Baltimore rubber business is Mr. T. N. Conrad, the manager of the well known Patapsco Rubber Co. Mr. Conrad is a veteran in the business and his experience and knowledge which is used in behalf of the company makes it one of the leaders in the trade. In addition to their large wholesale trade, they have a handsome and profitable retail business and carry a full line of novelties, mechanical goods, and druggists' sundries. The Patapsco Rubber Co. are finely located for doing a retail business, being situated on the thoroughfare, No. 12 North Charles street, and are with one exception the oldest stand in the city. They have six men regularly on the road and cover all the territory south of the Ohio and east of the Mississippi rivers. Mr. Conrad says, while this season's business has not been what they would like to have had it, it has increased very materially over last year's. He attributes the falling of the mackintosh and shoe business to the mild weather, but their sales in other lines have more than made up the deficiency. They have a scheme on foot to develop new territory in which they propose to push the sale of a fine line of mackintoshes and there is no doubt that under the direction of the able manager and assisted by their popular traveler, Capt. E. G. Buck, they will accomplish the desired ends. Mr. Conrad endorses the exposition project, has subscribed for stock of the company, and will make an effort to have the factories he represents make an exhibit.

The Chesapeake Rubber Co. are another example of Baltimore push and enterprise, having one of the most widely known rubber jobbing houses in the United States. Messrs Solomon and Jacob Preiss are the moving spirits. This house reaches out further than any other in Baltimore, having recently built up a good trade in California, and the far northwest, which is not only a credit to their enterprise but a compliment to their keen business sense. They are fearless of competition and are selling in Chicago's and St. Louis territory right along. They have seven knights of the grip, headed by Mr. Harry Preiss, who is responsible for the development of the Pacific-coast trade. Trade has increased a third over 1894 and the prospects for this year are very bright. They cater to a special trade in the far west and are now filling duplicate orders from that territory. Mackintoshes in the south are becoming more popular than ever before. Mr. Harry Preiss is a ready and interesting writer and THE INDIA-RUBBER WORLD is promised something from his pen.

While George P. Thomas, Jr., will not talk for publication, it was learned that his popular house has not suffered during the past year. His handsome store occupies the most desirable location of any in Baltimore, being on the corner of Charles and Baltimore streets, which is the site of the oldest-established rubber house in the south. Mr. Thomas has recently had a handsome show-window added on the Baltimore street front. This is a great improvement and enables him to make a finer display of his large stock of rubber goods. He is doing a live retail business, paying but little attention to jobbing; yet he does not a little exporting.

The Tillinghast Rubber Co. have a modest establishment, but it is a surprising fact that they are the banner hose-dealers in the city—this being their specialty. "Never judge the singing qualities of a bird by its feathers" is an adage that aptly applies to this house.

G. A. Zireckel & Co. are the agents for A. J. Tower & Co. and are located away over in Canton, but they seem to have the "get there" faculty and have developed an immense trade, principally among watermen. It is said they are selling $125,000 worth of rubber shoes and boots a year alone.

The Patapsco Rubber Co. sustained a severe loss upon the death of their late president, Mr. W. H. Corner, which took place at San Antonio, Texas, last Easter. They have elected W. H. Jones, of Baltimore, in his place.

WHO SELLS HAMMERING MACHINES?

TO THE EDITOR OF THE INDIA RUBBER WORLD: Will you kindly inform us where and to whom we can apply for hammering machines such as are used in France for making toy balloons? KELLY MFG. CO.

Cleveland, O., October 25, 1895.

RUBBER GOODS IN THE HOLIDAY TRADE.

DEALERS in toys in New York who were questioned during the holidays seemed agreed that India-rubber goods in their line were, temporarily at least, in reduced demand.

"Just now," said F. A. O. Schwarz, a dealer in toys exclusively on Fourteenth street, "there is a great run on mechanical toys—steam-engines, railroad trains, iron bridges, boats with working machinery, and other things meant to help educate boys. We have sold over 5000 locomotives this season, being obliged to replenish our stocks twice. We count on a run on a new line of toys for about three years, and then something else is apt to come up. Few novelties in India-rubber have been offered to us lately by American manufacturers, but every year when I go to Europe many are offered from French and German manufacturers.

"There are some objections made to India-rubber. The odor is sometimes complained of, but this is not important. What is more objected to is the paint, which is necessary to the attractive appearance of rubber dolls and animals. But the principal thing is the discovery of indestructible materials, cheaper than rubber, without odor, and holding the paint better. In animals we have now a great assortment of good models, covered with hair or wool, which gives them a lifelike appearance and makes them good sellers." Here Mr. Schwarz laid his hand on a toy milch-cow eighteen inches high, covered with a natural-looking coat of hair, and as he twisted the head slightly it "moo-ed" like a thing of life. He went on to say: "We couldn't get anything like that in rubber; and yet we do sell some rubber toys. Here are small dolls and animals—just such a line as we have always carried, except that the stock is smaller than it used to be. It may be that rubber will become fashionable again when the manufacturers are able to satisfy the constant demand for novelties."

At a retail rubber store occupying an exceptionally good location, an attractive display of rubber toys occupied one of the windows. In answer to questions the manager said: "We have always handled some toys in the holiday season. These goods are imported for the most part, and our efforts to get novelties have been met with appreciation from our patrons. We might have a larger demand for negro dolls, but the black paint comes off too easily."

A few calls upon the proprietors of rubber stores and some direct questioning upon the subjects that the toy men had discussed developed other views. Said one dealer: "We have a steady sale of rubber toys the year round increasing somewhat during the holidays. Formerly we carried imported goods but our stock now is wholly domestic. The amount of paint that is on a doll for instance is so small that it cuts no figure at all, and if a baby insisted upon eating it all off (were that possible) it would do no harm. As for *black paint* on dolls, all that I have ever had were made of a black rubber compound and the color was as fast as if it had been a child of the blackest of Africans. Woolly cows and such toys are pretty at first but they are destroyed very quickly and are simply not in it with India-rubber cattle. The fact is many toy sellers want toys that the children will dissect and destroy as soon as possible. They figure that it helps the business."

Another gentleman familiar with the whole toy trade said: "That is an old, old story that the toy men are never tired of telling and yet they continue to buy and sell rubber toys. As a matter of fact they cannot help it. Buyers want toys that are safe. An infant can use a rubber animal for instance, as a club, can throw it at the windows, can try to swallow it, indeed do anything with it with small likelihood of harm either to the article itself or to anything else. Parents know this and are not to be talked into buying some makeshift, either because it is more gaudy or is a trifle cheaper."

Visits to the toy-shops showed a number of toys involving the use of India rubber as an auxiliary material. Such were rubber-tired hansom cabs, trotting-sulkies with pneumatic tires, carpet-sweepers with rubber bands, fire-engines and other fire-department apparatus equipped with rubber hose, etc. An imported patent jumping frog was to be seen in most of the shops. There appeared to be an unusual variety in the coloring of toy animals, and a real novelty was a rubber tortoise, imported from France, with a surprisingly life-like color. The toys of this class are still small, one dealer reporting his inability to find anything on four feet more than six or seven inches tall. A home manufacturer to whom he had applied said that the demand for larger animals was too slight to justify making a set of molds for them, the whole trade in the United States in rubber animals of extra size probably not exceeding $10,000 a year. In a department store the rubber-toy trade was said to be on a decline, few rubber dolls being called for. There was still a good sale for balls, though celluloid was coming into competition with rubber for some kinds of balls. They were selling leather footballs that were displacing the rubber goods formerly handled.

* * *

IT is an open question whether the holidays increase the sales of mackintoshes. That is to say, different dealers entertain different views on the subject. At a store devoted to the better class of retail trade in New York it was stated that some of their best waterproof garments were sold every year for holiday presents, and that increased sales were looked for regularly just before Christmas. Sales had not been as heavy as usual this season, either at Christmas or for some time previously, on account of the unusual amount of dry weather.

* * *

"THE holidays no longer make the same difference in the trade in smokers' goods that we once experienced," said a dealer in this line. "One reason is to be found in the growth of the habit of pipe-smoking. Formerly pipes and smoking-outfits were presented at Christmas to many gentlemen who prized them as novelties, but who seldom or never used them. Nowadays, however, when so many men smoke pipes, and buy them all the year round, there is less reason for their friends to send them pipes for presents at this season. The growing popularity of pipes means an increased demand for rubber mouthpieces and rubber tobacco-pouches." With regard to the latter, on the other hand, an importing house which represents here an important English manufacturer said that they no longer attempted to handle tobacco-pouches, for the reason that they had been able to secure so few large customers.

* * *

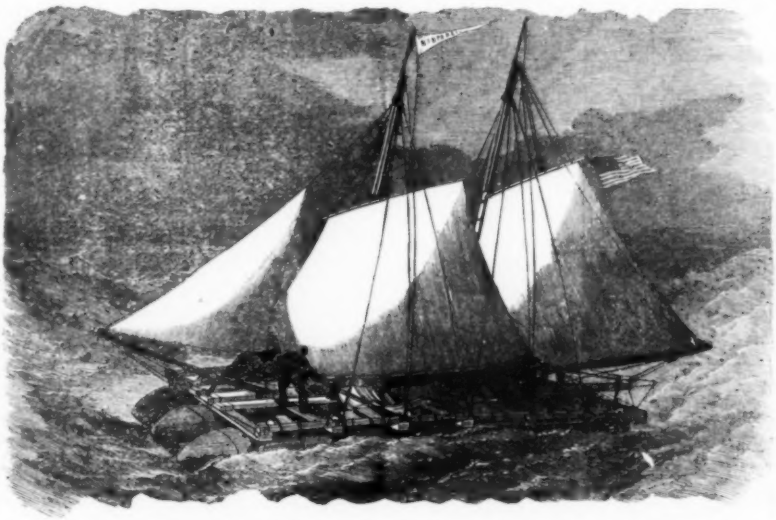
ONE line of specialties which was in undoubted demand during the holidays was fancy atomizers. They were to be seen in greater number than ever before, in greater variety, and more prominently displayed in many stores than has been usual. Together with perfumes these atomizers formed the principal attraction offered for the holidays in drug-stores. They were also much in evidence in dry-goods and department stores.

A RUBBER BOAT THAT CROSSED THE SEA.

ONE of the most interesting experiments ever made in the use of India-rubber was in the construction of a life-saving raft which carried three men across the Atlantic nearly twenty-nine years ago. This novel craft was the invention of Mr. E. L. Perry, who is still in the rubber industry, being now superintendent of the Peerless Rubber Manufacturing Co. (New York), of which he was the founder. The description of this life raft which follows is taken from *Harper's Weekly* of August 31, 1867, a time when the events referred to were still fresh in the public mind:

"The American public had been so completely surfeited with accounts of the great ocean yacht race that it took very little interest in the project of the American life-raft *Nonpareil*, which sailed from New York on June 12 last, with the intention of crossing the Atlantic. Those who took any notice of it declared the project to be an insane idea; and when, after reaching the lower bay, the raft was run ashore at Staten Island and a part of the crew disgusted came back to the city overland, the public simply remarked "I told you so," and took no further interest in the subject. But the captain of the *Nonpareil*, obtaining a new crew, proceeded; he has landed his singular craft in safety at Southampton, England; and she is now the English naval sensation of the day.

"The illustration herewith shows the raft laboring in a heavy gale. The immersed portion of the raft consists of three India-rubber waterproof cylinders, with pointed ends, each 25 feet long by about 2½ feet in diameter, connected at their centers by a waterproof sacking; these are strongly secured by ropes to a wooden frame or staging, 21 × 12½ feet. The base of this frame consists of seven stout 10-inch planks; and running fore and aft amidships, on the top of these, are three similar planks, the middle one projecting about five feet beyond the after part of the frame; and through the end of this plank the rudder is worked, the lower part being secured by iron stays. The raft has two masts, the foremost being rigged as a lugger, and the mainmast like a cutter. There is a bellows apparatus for filling the tubes with air. The shelter for a crew is a sort of tent formed of a waterproof cloth hung over a boom.



THE AMERICAN LIFE-RAFT "NONPAREIL."
[*By permission of Harper & Brothers.*]

"The three men who navigated the *Nonpareil* were John Mikes, the captain, George Miller, and Jerry Mallene. At night two slept under the tent, while the third watched. Except Miller, who was slightly ill for two days, they all enjoyed good health during their six weeks' voyage. They had an abundant supply of fresh water in a number of barrels lashed to each side of the raft, having thirty gallons of water to spare when they arrived. Their provisions were stowed in a locker under the tent. An oil-lamp on board was their only means of procuring artificial light and fire. They had a fortnight's bad weather, and were seven times obliged to lay to; but the raft behaved exceedingly well in the sea, and the men never got wet. As they had no chronometer they sailed by dead reckoning, and corrected their position by the help of the vessels they spoke.

"On their arrival at Southampton Mr. J. R. Stebbing, president of the chamber of commerce at that port, hastened to congratulate them; and Captain Mikes, having landed, went to report himself to the United States consul. Before laying up the raft in his yard, Mr. White towed her all around the harbor, and showed her to some of the royal family, who were on board one of the yachts there. The members of the Royal Yacht Squadron at Cowes gave Captain Mikes a hearty welcome and entertained him at dinner a few days after his arrival."

A NONAGENARIAN RUBBER-MAN.

ON Sunday, December 15, at his home in Woonsocket, R. I., the ninetieth birthday of Lyman A. Cook, was celebrated by a large number of his friends. In the evening a reception in his honor was given by the Women's Aid Society of St. James Episcopal church, in which church he long has been a vestryman and a liberal supporter. The event deserves to be recorded here on account of Mr. Cook's former connection with the India-rubber industry.

Lyman A. Cook was born at Cumberland, R. I., in 1805. At the age of twenty-one, together with his brother Willis, he settled in Woonsocket, where they engaged in the manufacture of machinery, continuing it until 1868. During part of this period they were interested in the cotton-manufacture, and for awhile after 1868 they remained in partnership and conducted a real-estate business—and later were among the original members of the Woonsocket Rubber Co. About the same time the Bailey wringer works were started, and the new rubber company manufactured the rubber rolls needed. Their business gradually expanded, including the manufacture of piano-covers, pencil-tips, rubber coats, and finally rubber boots. In the early seventies Mr. Cook became financially embarrassed in some of his numerous ventures, and Mr. Banigan purchased his stock in the Woonsocket Rubber Co. With the money thus obtained he was enabled to discharge his obligations and retire from active business.

THE governors of Amazonas, Maranhao, and Ceará have accepted the invitation of the state government of Pará for causing their states to be represented at the interstate exhibition next year.

THE Lycoming Rubber Co. are enlarging and remodelling their Chicago offices. They carry a large stock of men's and women's razor-toe shoes.

THE RUBBER-TREE.

IN the window of the restaurant,
Where steaks are rippling free
With leaves outspread we now observe
The solemn rubber-tree.

In candy stores it also blooms—
And in the shop of rugs
It, in the window, casts its shade
On terra-cotta jugs.

Where'er we go we're sure to find
The sombre rubber-tree,
Until we wonder what on earth
Its mission e'er can be.

We see it in the lone back yard,
We see it near and far,
We see it on the oyster stand,
The barber's shop and bar.

We see it on the airy porch,
Upon the sideboard, too—
We see it at the druggist's door
The sunny zephyr woo.

We see it on the flat's high roof,
Where frisky swallows soar;
The only place it doesn't bloom
Is in the rubber store.

—R. K. M, in *Truth*.

RUBBER INDUSTRY IN MASSACHUSETTS.

WHILE in other states the relative conditions of industry, year after year, are determined only from the most apparent indications, Massachusetts maintains a state bureau charged with the work of recording details from which deductions of value may be made. In reviewing the latest report received from this bureau,* it may be pointed out, as has been done in former years in THE INDIA RUBBER WORLD, that these statistics are not in the nature of a complete industrial census of Massachusetts, but only authentic data from a certain number of representative establishments, reporting year after year, under such conditions as to enable the officials in charge to determine whether progress is being made, or the reverse.

A summing up of the work shows that the decreases noted in the India-rubber industry during 1894, as compared with 1893, were much less than in the case of all industries considered together. The figures which follow represent percentages:

	All Industries	India-Rubber.
Capital invested	Decrease, 3.13	Increase, 6.13
Stock used	" 10.13	Decrease, 0.58
Goods made	" 10.27	" 5.87
Number of employés	" 6.22	Increase, 6.10
Wages paid	" 9.30	Decrease, 3.85
Proportion of business done compared with capacity of plants	" 3.95	Increase, 3.52

The next comparison relates to the India-rubber industry in the two calendar years 1893 and 1894, as follows:

	1893.	1894.
Establishments reporting	33	33
Number of private firms	15	15
Number of partners	26	28
Number of corporations	18	18
Number of stockholders—male	436	435
female	309	288
trustees	72	63
Capital invested	$13,629,811	$14,465,922
Stock used	$11,573,926	$11,506,222
Value of goods made	$20,920,002	$19,691,546
Average number of employés	7 064	7.495
Wages paid	$3.287,691	$3,161,208
Proportion of business done	67.03%	69.39%
Average number of days in operation	286.08	276.12

It is noted in the present report that during the earlier part of 1894 the industries of Massachusetts continued to be depressed as a result of the financial panic of 1893. From a table showing the employment of wage earners, month by month, during the two years, it appears that the average number of employés in the 33 rubber-factories declined from 7394, during the first half of 1893, to 6733 during the latter half. For the first six months of 1894 the average employment rose to 7355, and for the latter half of the year to 7796, the wages-list for December in that year being larger than was ever before reported by the factories under consideration. Compared to the cotton, woolen, and shoe industries, these fluctuations are very slight, while the recovery from depression in the India-rubber industry was more complete than in any of the others named.

Finally, attention may be called to a table, covering a period of ten years (1885–1894), showing that with two exceptions the reported value of goods made was greater in every year than in the year preceding. The first of these exceptions was for the year 1888, and the second for 1893, the date of the last general business depression.

* The Annual Statistics of Manufactures, 1894. Ninth report. Boston: Wright & Potter Printing Co. [Cloth. 8vo. 299 p.]

PLANNING CABLES FOR THE PACIFIC.

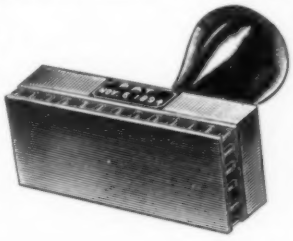
SEVERAL indications point to a renewal of interest in an American cable across the Pacific. There has been incorporated at Albany the Pacific Cable Co., to run its own or leased lines from the Atlantic to the Pacific and thence to Japan via Honolulu, and thence to the continent of Asia and islands adjacent thereto, including Australia. The capital is $100,000, and the directors Edmund L. Bayliss, H. L. Leroy, C. D. Wetmore, G. A. Mills, Montclair, N. J.; J. M. Robertson and W. H. T. Hughes of New York; and F. H. Allen, Pelham Manor, N. Y. Since the incorporation of this company J. Pierpont Morgan and James A. Scrymser have become directors, the latter has been elected president, and an executive committee appointed and authorized to increase the capital to $10,000,000.

Another recent incorporation is that of the Pacific Cable Co., under the laws of New Jersey. The capital is $1,000,000, divided among the incorporators as follows: Abram S. Hewitt (1500), D. O. Mills (1000), G. M. Dodge (1000), Frederick D. Grant (500), Wager Swayne (500)—all of New York; James J. Hill (1000), St. Paul, Minn.; Z. S. Spalding (2500), San Francisco; John H. Browning (1000), Tenafly, N. J.; and Mason W. Tyler (1000), Plainfield, N. J. It is specified that offices shall be maintained in Jersey City and San Francisco, business to begin on January 1, 1896. The object is the construction and operation of electric submarine cables in the Pacific. Colonel Spalding is a wealthy Hawaiian planter who has a concession for a cable to the United States, with a subsidy of $40,000 a year. The United States congress has been asked to vote aid to the enterprise, on the understanding that the government will have the option at any time of buying the cable at the actual cost of construction. The company formed through his efforts hope to be able to extend the cable to Australia and China.

Meanwhile the British colonial secretary, Mr. Chamberlain, has given evidences of being committed to the plan for a Pacific cable proposed at the intercolonial conference of 1894 at Ottawa. A commission has been appointed to perfect plans for the proposed cable, and it is reported that Mr. Chamberlain has expressed the opinion that the project showed a very fair prospect of remunerative return on the capital required.

NEW GOODS AND SPECIALTIES.

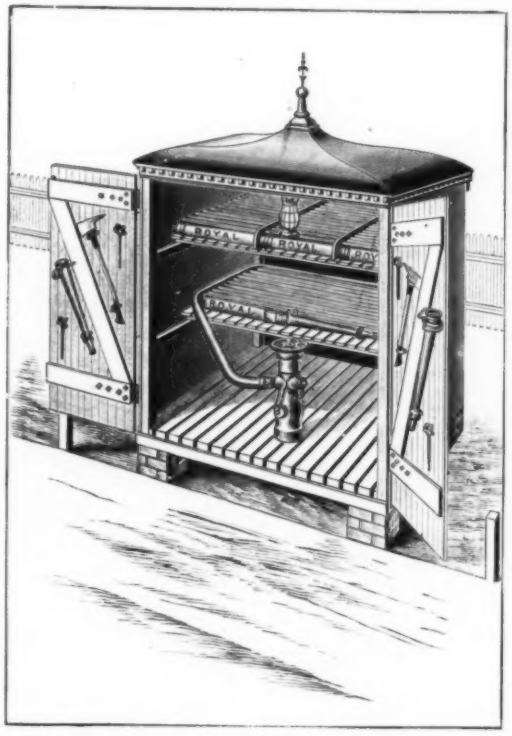
A VERY neat, compact, and durable flexible cushion for rubber hand stamps, is that shown in the illustration. The idea embodied in the invention is as practical as it is simple. As will be seen, it consists of two parallel rubber plates held apart by flexible rubber pins. The bending and compressing of the pins makes it possible to print on yielding and uneven surfaces, insures a good impression every time, and greatly lessens the labor of stamping. Manufactured by the Barnard Stamp Co., 311 Olive street, St. Louis, Mo.



"ROYAL FACTORY" FIRE HOSE.

THE illustration shows a standard factory hose house equipped with the Royal hose. As far as the house is concerned it is very neat and needs no special description. Its hose equipment, however, is well worth dwelling upon. It is a single jacket rubber-lined hose, and the "Royal" brand may always be recognized by the two dotted blue lines that extend the entire length of each section.

Fire hose, to conform to specifications of the Associated Factory Mutual Insurance Co.'s, should possess three essential features, viz., lightness, durability and strength. This combination is effected in "Royal" Factory Fire Hose. The jacket is so woven that it will resist extraordinary pressure, whether laid in a straight line, a kink or curve. The rubber lining is of high quality Pará gum, and is made double under the Patent Seamless Tube Process. Jacket and lining are cemented together under steam pressure, giving perfect and permanent adhesion.



The waterway is fully 2⅝ inches in diameter, and perfectly smooth. Manufactured by the Mechanical Rubber Co., Cleveland, Ohio.

A RUBBER CUSHIONED SADDLE.

THE Standard rubber cushioned, spring bicycle saddle is constructed on eminently common sense principles. The frame is made of one piece of bent wood, covered with heavy canvas on which rests the upholstered leather covered seat making it a strong but elastic and resilient saddle. The spring underneath is hinged to the front part of the frame in a manner that permits free action of the same, and is of sufficient stiffness not to make the saddle too springy. The rear and loose end of the spring rests on a rubber cushion and prevents vibration and shocks. The saddle is shaped to form a comfortable and attractive seat, and meets all requirements in this direction, it permits free movement of the legs, is well ventilated, strong and durable, and at the same time elastic and resilient. It can be tilted to any desired angle, does not heat or chafe, and is made of best material and workmanship, looks well on the wheel and is guaranteed to give perfect satisfaction. Its weight is but 18 ozs. Manufactured by the Capitol Mfg. Co., 125 Rees street, Chicago, Ill.

THE DUPLEX ADJUSTABLE SPRINKLER.

AN exceedingly neat and practical lawn sprinkler, that is hardly larger than the illustration, and yet as effective as the very largest, is what is known as the Duplex. It is adjustable to either high or low water pressure; will deliver a fine mist or a heavy rain, and can be used with any kind of water. It is light and simple and has no revolving parts to become clogged or get out of order. It can be used as a nozzle for washing windows, etc. It is made of brass and nickel-plated. Manufactured by the Adams & Westlake Co., Chicago, Ills.

THE RAINMAKER LAWN FOUNTAIN.

THE illustration shows a very popular and practical type of lawn sprinkler. As may be seen it is furnished with runners of the toboggan kind that allow it to be easily drawn over the turf, and has further simple unobstructed waterways that lead up to the wings deflecting the water just enough to throw it in a full circle of finely divided rain drops. It is the exact counterpart

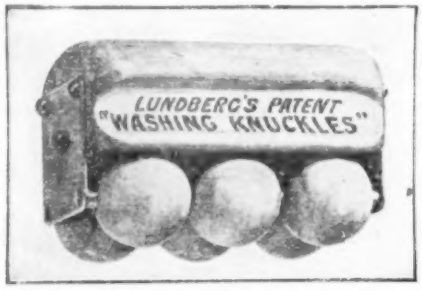
of the "Mystic" designed by the same house, except that the latter has a stop-cock just above the spot where the water enters, allowing a variety of modifications of the stream before it is sprayed. The body and wings of the sprinkler are made of solid brass, finely polished, and the base is nicely japanned. Another variety known as the "Mystic No. 2" differs from the "Mystic" in having a stand with a pipe one foot high. Manufactured by F. E. Kohler & Co., Canton, Ohio.

THE HANDSOME NORMANDIE.

THE Wales-Goodyear Co. has always been famous for the superiority of its cloth top rubbers. Old rubber men have not yet forgotten the fact that this company had for many years a monopoly of cloth top rubbers. It made Arctics for half a dozen years or so before any other company started in this branch of rubber foot-wear, which has since assumed such large proportions. The arctic, however, is not the only popular cloth top shoe made by the Wales-Goodyear Co. The "Normandie" is another and is a comparatively new shoe. It has a cloth top of cashmerette, very fine, soft and dressy. The vamp comes high up over the shoe, affording ample protection, even in the severest winter weather. In fact there are few shoes that are more universally serviceable for general winter wear. It comes in men's, women's, misses' and children's sizes, and in several styles, from a comfortable round, to the sharp Razor toe, affected by people who wear pointed shoes, and want their rubbers to correspond.

WASHING KNUCKLES OF RUBBER.

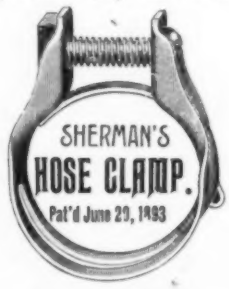
A NEW and ingenious English invention has as its object to obviate the use of the brush in the washing of clothes. It is well known that brushes are used in laundries in the place of the knuckles formerly employed, and one of the consequences is the rapid wear and tear of linen, lace, and similar fabrics. The inventor has devised an ingenious apparatus, which is to take the place of the brush, and of the knuckles, doing the work as effectively as the former, and with as little damage to the material as the latter. It consists of a solid piece of hard wood, so shaped that it is easily held in the hand. Attached thereto are six India-rubber balls, which revolve as they are rubbed over the cloth. In this way, it is claimed, an exact imitation of the action of the hand in rubbing textile fabrics is produced, the result being the effective removal of dirt, espe-



cially from the edges of collars, cuffs, neck-bands, etc., without fraying the material, and with a minimum of labor; the use of the brush being entirely done away with. The clothes after being soaped are spread either over a plain board or a corrugated washing board in the usual way, and the washing knuckles are then rolled up and down over the clothes with pressure; the rolling motion and the elasticity of the India-rubber balls quickly removing all impurities. The new apparatus is strongly made, the metal parts being of galvanized iron or brass. Manufactured by Mr. A. P. Lundberg, Bradbury Works, Bradbury street, Kingsland, London, N.

SHERMAN'S DOUBLE HOSE CLAMP AND MENDER TUBE.

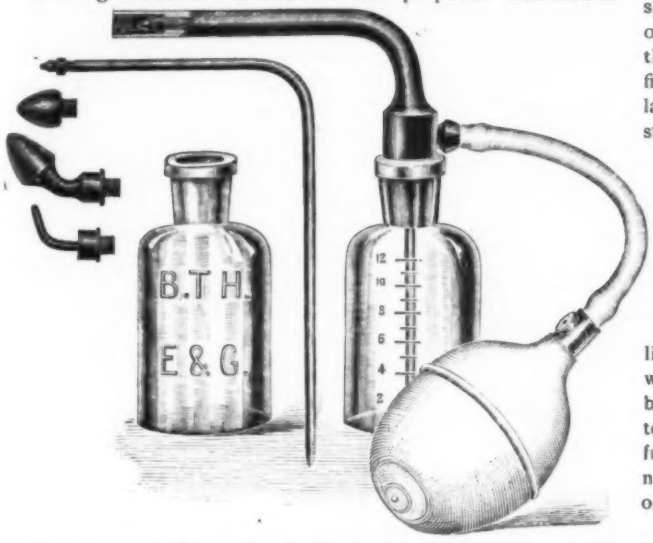
THIS article is made of brass, is strong, durable and easily applied. The clamp is easily applied with the fingers, all that is required is to remove the bolt, open the clamp with the fingers,



rebend the clamp on the hose and replace the bolt. No special tools are required. This double clamp is, of couse, especially designed for use with the mender tube shown in the illustration. But one bolt is used which is easily adjusted with a screw driver. Manufactured by H. B. Sherman Mfg. Co., Battle Creek, Mich.

THE "B.T.H. FLEXIBLE" WATER-OIL ATOMIZER.

AN atomizer that can be used for vaseline, oils, water, or acids is that shown in the accompanying illustration. It is the subject of a recent patent and is already going well in the trade. It has two flexible inner tubes, and is provided with two bottles, one for water, one for oil, thus overcoming all objection to using the same instrument for both purposes. The tube in



the atomizer is for producing a fine spray from aqueous preparations. The extra tube and bottle are for oils and coarse sprays. It is the simplest thing in the world to change the tubes or to clean the parts. To do this it is simply necessary to detach the tip, push the tube that goes into the bottle upward until it protrudes, and then pull it gently out of the barrel. Manufactured by Ellis & Goltermann, New York, N. Y.

A CIRCULAR PENCIL-RUBBER.

NEXT to securing satisfactory rubber compounds, the chief difficulty with lead-pencil tips has been to keep them in place. The first ones made were in the form of caps or thimbles, which soon became stretched out of shape and were lost off the ends of pencils. Rubber tips inserted in the cedar were more satisfactory, but even these some-

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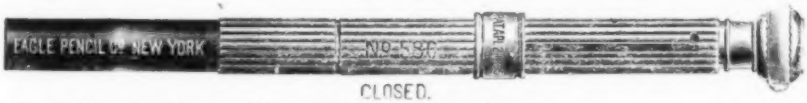
times roll out of place, if much used. In the illustrations accompanying this article are shown a newly-patented pencil-rubber in the form of a disk surrounding the pencil. It is held in place by being compressed between two metal washers, though enough rubber projects beyond the edges of the washers to



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last much longer than would be required by any ordinary pencil-user. The illustrations not only show the form and the application of the rubber, but also some of the features of a new fancy pencil, introduced by the same manufacturers and also covered by patents. It involves not only the ordinary lead pencil—either end of which may be inserted in the nickel tube—and one of the new erasive disks, but also a small knife-blade designed for sliding safely within the tube when not in use. One of the engravings exhibits the pencil open, and the other shows its appearance when closed. Manufactured by the Eagle Pencil Co., No. 73 Franklin street, New York.

THE PORTABLE STRIKING BAG.

THE Portable Striking Bag is composed of an iron base, weighing 75 pounds, to which is attached a heavy coil steel spring having a hickory reed driven in one end of it. The hickory reed is reinforced at the base by a steel rod running through the center. To the top of the reed a wooden cap is loosely fitted, and a leather striking bag encasing a rubber bladder is laced to the wooden cap. The leather bag has four leather streamers fastened to the lower end of it, which are drawn down tight and secured by thongs to a loose wooden collar which enircles the reed.

When the bag is struck a glancing blow it revolves around the reed, and thus relieves the strain which would otherwise be brought to bear. The tension on the reed is further relieved by the natural play of the bag on the wooden cap.

When the bag is struck a direct blow, the steel spring makes it return to an upright position. The return of the bag is very rapid, and the effect is similar to having an opponent in front of the person exercising.

This bag has many movements which are not found in the ordinary striking bag, and presents numerous new and interesting features. It is the only one on the market to which an upper-cut blow may be given. The bag is made in a strong and attractive manner, and will withstand the severest gymnasium use.

Our best medical authorities agree that light, systematic exercise, which will strengthen and develop the muscles surrounding the vital organs, is essential to the health of all who lead a sedentary life, or are confined within doors during business hours.

The objections which the general public have had to contend with heretofore in using such a bag, are: First, it required a gymnasium or special room to be operated in; second, it was sure to destroy the plastering; third, it was anything but an ornament in a private house.

The Portable Striking Bag has overcome all such difficulties. It can be operated in any room, and placed in a corner or closet when not in use. Having no connection with walls, floor or ceiling, it cannot affect the plastering, and is practically noiseless. It is very rapid in its return, and most interesting, and in fact amusing. Manufactured by the Standard Typewriter Exchange, 604 Chestnut street, Philadelphia, Pa.

THE VIM TIRE WELDER.

THE numberless repair kits now in use enable a cyclist to make temporary repairs while on the road. Such repairs however have the fatal weakness of depending upon the sticking qualities of unvulcanized rubber. Realizing this many riders

have sent damaged tires back to the makers to have patches vulcanized in. This is satisfactory enough except that it involves a delay of several days and the payment of two expressages. The Vim welder is a practical inexpensive vulcanizer designed for use by the repair man or by the rider himself if he chooses to own one. It is so simple that any one can use it, and that too without special coaching. By its use the tire can be repaired in a very few minutes without taking it off from the rim. It is made in two styles, one for gas and the other for oil.

The permanence of a repair depends on success in vulcanizing, and the proper temperature is of the utmost importance in accomplishing this. If heat enough is not applied, the rubber would not be completely vulcanized and would be little, if any, better than a repair cemented in the ordinary manner; while if the temperature were allowed to run too high the rubber would be burned and the tire ruined. The Vim Welder is so made as to furnish exactly the right degree of heat for vulcanization. The time that a repair is being vulcanized is of equal importance and to prevent error and relieve the repairer from keeping close watch on the time, the welder is equipped with a special form of alarm clock, which has a graduated dial marked at intervals from one minute to ten. It is wound with an ordinary key, once a day. As soon as the tire has been put in place and the vulcanizing process commenced, the clock is set at the proper time that is desired to leave the tire in the welder. Setting the pointer at this place automatically starts the clock, and at the proper interval the alarm is sounded showing that vulcanizing is complete. As different times are required for making different repairs, the clock is arranged so that the pointer returns to the starting point on each alarm, and it is necessary to set it again each time, thus avoiding any chance of a mistake being made by leaving the pointer set at the wrong time.

Special dies are furnished for vulcanizing in valve stems, and the Vim Tire Welder will be found adapted to mend any injury which can occur in the quickest possible time.

Turning to the illustration one sees a tunnel of cast iron beneath which is a Bunsen burner. When this is lighted a current of hot air is constantly passing into the vulcanizing block at the top of the tunnel. The heat reaches 290° F. and then stays there as that is the proper temperature for such vulcanization. For an ordinary puncture, cement is injected, a plug put in, the die set down upon the spot and the cure is effected, making the weak place stronger than before. A cut is patched with a special reinforced stock that comes in strips and may be cut off any length desired. The welder is so made that it may be fastened up against the wall out of the way, and if desired is fitted with two arms that hold the bicycle while the damaged part of the tire is being vulcanized. Manufactured by the Boston Woven Hose & Rubber Co., Boston, Mass.

THE "VIOLA" LADIES' MACKINTOSH.

THE Viola is a stylish, popular garment, and has already proved itself an exceedingly ready seller. The cape is usually attached, but is sometimes made detachable, and, being supplied with a turn-down collar, may be worn separately. There

are two long straps on the inside. The best and medium grade mackintoshes are made with small arm scye, and are fly front; the cheaper grades have large arm-scye, and are single-breasted. This garment is supplied with the usual pockets. Manufactured by the Boston Rubber Co., Boston, Mass.

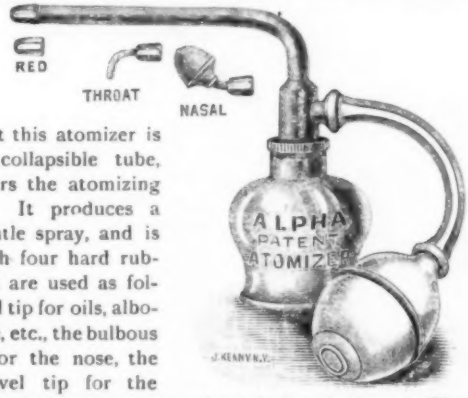
LIFE-SAVING MACKINTOSH SUITS.

WHAT is known as the L. S. Brand of mackintosh goods is shown in the accompanying illustration. Those goods are made for practical use. They consist of a short coat, made by a patented process, with no shoulder seams, thus doing away with possible leaking, and a pair of trousers. The goods are either black or tan, and are furnished with buttons or patent fasteners, as desired. They are already in use at the life-saving

stations by sailors and fishermen, and are becoming popular among motormen, teamsters, etc.. A letter received by the manufacturers from the keeper of the Race Point Station of the Life Saving Department gives a good idea of the excellence of suits. He writes: "The rubber storm suits have been put to practical test at this station, keeping the men dry when the oil suits failed to do so. It is lighter, neater, will not stick in warm weather or stiffen in cold weather or make a man as cumbersome and clumsy as the oil suits. And as to its keeping men dry, on the night of Sept. 20th, '94, the rubber suit was worn by the four respective watches of this station, keeping the men who wore it dry, while those wearing the oil suits were all more or less wet." Manufactured by John R. Farrel & Co., 765 Washington street, Boston, Mass.

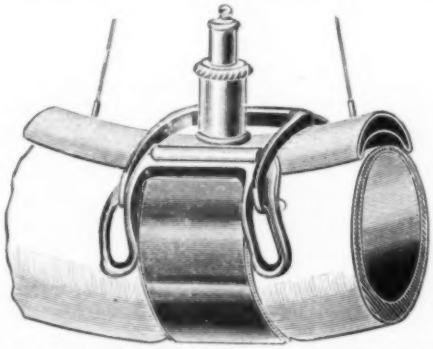
THE ALPHA CONTINUOUS SPRAY ATOMIZERS.

THE Alpha No. 10 atomizer is designed for either oil or water. It is especially adapted for the vaporizing of medicinal agents for the cure of throat and nasal troubles. A special feature about this atomizer is the patent collapsible tube, which renders the atomizing continuous. It produces a fine and gentle spray, and is supplied with four hard rubber tips that are used as follows: the red tip for oils, albolene, vaseline, etc., the bulbous swivel tip for the nose, the covered swivel tip for the nose-pharyngeal treatment, the straight tip for the throat. The atomizer is made of the best stock, is handsomely put up, and is manufactured by Parker, Stearns & Sutton, South and Water streets, New York, N. Y.



THE SAFETY TIRE CLAMP.

THE tire clamp here shown is made of a strip of brass ¼ inch in width, connected to a steel casting which fastens on the wooden rim of the wheel, being drawn tight by the reinflation of the tire. In use a rubber strip is placed directly over the puncture and fastened down with the clamp pressed snugly against the tire until it is again inflated. The point is made that the clamp will fasten over any part of the tire's circumference, and is useful in all cases where single or double tires require mending; also that by using several of the clamps and reversing them alternately, quite a large tear may be mended. The cut shows the clamp in position directly opposite the valve. The clamps are packed one each in an envelope, with directions for using. Manufactured by J. M. Schwerin & Co., Newark, N. J.



A JUST CAUSE FOR WAR.

BY G. TABAN.

THE few people who hold the crude India-rubber trade in the hollow of their hand have had an idea that they could manage it as they pleased, and that no one would ever be the wiser. But they might have known that a rise in rubber and short stocks and all that sort of thing, at the beginning of a season in which every bicycle-maker expected to turn out more wheels and to buy more tires than anybody else in the trade would start some people to thinking. Already the secret has been punctured, beyond repair, and now that 3000 newspapers in the United States have printed the facts lately about "the unlicensed and wholesale destruction of the trees in South America," the poor wheelmen will know where to put the blame for high prices for tires. I read in the able *Post Express*, of Rochester, N. Y.:

> The syndicates which gathered the raw material thought that they had an inexhaustible supply, and, instead of tapping the [rubber] trees, they cut them down ruthlessly and killed thousands and thousands of trees that might have kept on bearing the precious gum.

The worst of it was that the trees were not cut down to get rubber, but to keep anybody outside the syndicate from getting any rubber in future. Said they: "We are in business for gain, not philanthropy, and our profits haven't been big enough to satisfy us. There is too much rubber in the world. We talk all the time about a famine, to keep up prices, but rubber keeps coming to market. If we could only kill half the trees, shortening the yield one half, we could double the prices of rubber and get rich twice as fast."

So the syndicates induced the governors of Pará and Amazonas to pay the expenses of a lot of immigrants from Europe, on the plea that their labor in the rubber forests would benefit the country, and when they arrived they were sent into the interior, where axes were put into their hands, with orders to kill rubber-trees. I doubt whether Srs. Ribeira and Lodre know to this day how they have been deceived by these slick Yankees. When they do learn, there will be something worse than talk of war against the United States. The government at Washington should be on the alert.

THE DUTY ON BICYCLE-TIRES.

THE treasury department has made the following decision regarding the dutiable classification of certain bicycle-tires: "The articles covered by this test are known as puncture proof rubber tires for bicycles. These tires consist of cotton cloth, in the form of tubing, heavily coated with India-rubber and stuffed with raw cotton. The question at issue is which of the materials, India-rubber or cotton, is of the greatest value. The board had an analysis made of a sample tire and finds that India-rubber largely exceeds in value the cotton entering into the fabrication thereof. The claim of the appellants that these articles are dutiable at 30 per cent. ad valorem under paragraph 460 is sustained and the collector's decision is reversed."

BRIEF-ABSTRACTS OF RECENT RUBBER PATENTS.

AMONG recent patents issued by the United States Patent Office, embodying applications of India-rubber or Gutta-percha to a greater or less extent, have been the following. It is not practicable here to do more than to note the use of rubber in each case, with sufficient detail to enable those who are interested to decide whether or not to look into any particular patent more fully:

TIRES.

No. 550,881.—Pneumatic Wheel-Tire. Frank M. Growney, New York, N. Y.

The combination with a pneumatic tire circular in cross section of a flat metallic tread secured by fastening devices, intermediate of its edges to the pneumatic tire, thus providing a narrow contact between the tread and the extreme periphery of the tire, so that the resilience or cushion action of the tire will not be impaired in any of its parts, and the flexible side bands extending from the edges of the tread to the inner side of the tire, the meeting edges of the side bands being detachably secured together.

No. 551,018.—Pneumatic Tube for Bicycles. Herbert N. Wayne, Newton, Mass.

As an article of manufacture a pneumatic tire comprising in its construction a rubber tube, having its ends over-lapped, the material comprising the ends of the tube being thickened for a considerable distance from the ends to prevent the bursting of the tube in the vicinity of the over-lapped ends.

No. 551,035.—Wheel-Rim and Tire Thomas B. Jeffery, Chicago, Ill.

The combination with a rim provided on each edge with two abutting flanges or ridges of the tire, also provided on each edge with two corresponding abutting ribs or flanges, the distance between the two tire ribs when the tire is deflated, being less than the distance between the two corresponding rim flanges whereby when the tire is inflated, a bearing is first established between the inner ribs and later between the outer ribs.

No. 551,075.—Wheel-Tires. James S. Copeland, Hartford, Conn., assignor to the Pope Manufacturing Company, Boston, Mass.

The combination with the rim of a wheel provided with sockets running lengthwise thereof, each socket having a contracted opening, an inflatable tube, and a flexible covering-layer having thickened edges forming a cross wise flange and having a lengthwise channel along the flange facing the bottom of the socket.

No. 551,088.—Pneumatic Tire. Edwin F. Murdock, Oakland, Cal.

In a pneumatic tire, the combination of an expansible tube the material of which is contracted into folds over a portion of the tread of the tire, and a retaining strip of ribbon constructed of fibrous material, the edges of which are secured to the tube on either side of the constructed portion on the outside of the tube.

No. 551,152.—Spring-Tire for Bicycle or other Wheels. Charles E. Beale and Charles A. Jewell, Boston, Mass.

A bicycle or other wheel tire, formed by a combination of bilateral-hinged, and independently acting circular or elliptical steel springs with friction bushings, fastening side by side upon the flat wheel-rim of the tire, and having for the running surface of the tire a rubber tread piece, crescent shaped in cross-section, and extending circumferentially upon and over the upper convex surfaces of all the springs entirely around the tire.

No. 551,471.—Tire for Bicycles. Henry W. O'Neill and Luther T. Haile, Denver, Ohio.

In a pneumatic tire, the combination with a comparatively thick tire tube substantially circular in cross section and thin elastic cells inside of this tire tube, the elastic cells having recesses therein whereby a continuous annular recess is formed and reinforced edges, of a heavy rubber tube located in the annular recess and having holes therein, communicating with holes in the cells, and a soft light rubber tube inside of the heavy tube adapted to be inflated whereby to close the openings into the cells.

No. 551,408.—Bicycle-Tire. A. B. Shaw, Medford, Mass., assignor to the Self-Sealing Bicycle Tire Company, Portland, Me.

An air tube for bicycle tires provided integrally with hollow approximately conical projections.

No. 551,516.—Wheel for Carriages. James E. Warner, Cranford, assignor to Edward Sabine Renwick, Millburn, N. J.

The elastic tire for carriage wheels consisting of an internal metallic spring, an external sheath, and a tubular filling of cork surrounding the spring and interposed between it and the sheath.

No. 551,533.—Pneumatic Tire for Bicycles. Frank Douglass, Chicago, Ill.

An endless bicycle tire casing, composed of cloth and rubber, with its inner circumferential edges lapping each other when one side is molded with a series of hooked shaped buttons, of the material composing the casing, a short distance from the edge and with a bead or projection a short distance from the edge of the other side, and with its edge folded over an inserted cord or wire; between this corded edge and the bead a series of openings or button-holes corresponding to the buttons of the other side to hook over the buttons of the opposite side.

No. 551,953.—Shield for Pneumatic Tires. James M. Gaston, Louisville, Ky.

The combination of an air tube having a flat periphery and an annular depression at each side of the flat portion, and a shield fitting the latter and having projections that engage the annular depressions.

No. 552,307.—Elastic Tire for Wheels. James Tonkes, Birmingham, England

The combined metallic and rubber sections for forming an elastic tire for the wheels of common road vehicles, each of the sections consisting of a metallic part shaped so as to embrace the sides of the ordinary metallic tire and wooden fellies and hook to the next sections at the sides thereof, and provided with one or more India-rubber blocks to form a portion of the wheel tread, the blocks fitting in corresponding perforations in the metallic section and provided with an enlarged base fitting inside the metallic section to bear against the ordinary metallic tire of the wheel.

BOOTS AND SHOES.

No. 550,604.—Rubber Boot-Leg. Clifton W. Eastwood, Providence, R. I.

A rubber boot having a leg portion of thin flexible material, but of sufficient thickness, that three laps of the same, when held together, will be self-sustaining, the same being provided with a locking device, secured on the inside of the outer lap, and comprising a fork, the members of which closely embrace the edges of the inner and intermediate laps at the upper fold, whereby change in the line of flexure thereat is prevented.

No. 550,829. Rubber Overshoe. William B. Kingsley, Melrose, assignor to the Boston Rubber Shoe Company, Boston, Mass.

A heelless overshoe or slip having an elastic heel-strap attached at its ends to the vamp and sole, and a flexible elastic dam constituting an elastic rearward extension of the sole and having extensions attached to the elastic portions of the strap, the heel-strap and dam constituting a continuous elastic clamping band, whereby when the overshoe is in use the heel and counter are tightly grasped, the entire band, including the dam and its extensions, being stretched, so that the rear edge of the dam is pressed closely against the bottom and edges of the shank portion of the boot or shoe to which the overshoe is applied.

No. 551,406.—Fasteners for Overshoes. William S. Richardson, Boston, Mass.

As an improved article of manufacture a fastener having a stud and ball holding member comprising a single piece of sheet metal with its longitudinal central portion bent, or struck upwardly and provided with one or more holes therein forming a rigid socket, and the edges bent over the raised central portion and overlapping the edges of the rigid socket to form resilient holding jaws and provided with attaching means.

No. 552,255.—Footwear. James H. McKechnie, Granby, Canada.

In a cardigan overshoe, the combination of a textile leg portion having its lower end provided with an opening in the front thereof,—of separate toe and heel linings, the heel lining attached to the leg portion, the rear edges of the toe lining attached to the forward edges of the heel lining and the lower edges of both linings and leg portion held between a suitable insole and an inclosing rubber foot portion, the latter having integral toe, heel, vamp and sole portions.

DRUGGISTS' SUNDRIES.

No. 551,070.—Syringe. Frank L. Woodford, Kansas City, Mo.

A nozzle supporting device for syringes consisting of a boss having curved discharge openings extending in a line concentric with and upon both sides of the syringe nozzle and the sides of the openings inclined at an angle to each other and downwardly.

No. 551,264.—Syringe. Elisha L. Day, Brenham, Tex.

A point for a syringe comprising a tube adapted to be secured to a suitable forcing apparatus, and a cap for the tube arranged over one end thereof; the cap having a closed or solid outer surface and having its marginal surface adjacent to the end of the tube but slightly separated therefrom so as to provide an annular lateral discharge space between the end walls of the tube and the marginal surface of the cap, whereby the fluid issuing therefrom is discharged in the rear of the cap in a substantially solid annular sheet.

No. 551,521.—Mucilage-Bottle. Elizabeth G. Bouton, Pittsfield, Mass.

In a bottle having an inwardly directed projection of the character described, the combination of an elastic hollow discharge stopper, provided with a restricted extension and adapted to be secured within the neck of the bottle, and rest upon the flange of the flat metallic strip secured within the stopper, the end of which extends into the opening in the restricted portion thereof and a tubular plug, in the lower end of the stopper to secure the strip and stopper in position within the neck of the bottle.

No. 551,792.—Nursing Nipple. Robert L. Shute, Chicago, Ill.

The combination in a nipple adapted for use upon a nursing bottle or similar vessel, of a removable plug adapted for insertion within the nipple and extending substantially from end to end thereof, the plug being provided with suitable passages for the flow of the milk and having a head adapted to distend the outer end of the nipple, a neck extending therefrom toward the bottle to prevent the collapse of the remaining portion of the nipple and an enlarged base portion to prevent the plug from falling into the bottle.

No. 551,939.—Invalid Warming Appliance. John C. Weber, Akron, Ohio.

A warming appliance constructed hollow of a flexible watertight material, and forming in one piece a bag or pillow with two angular wings, one larger than the other, and when open as a pillow conforming to the body and when folded within itself serving as a foot receptacle.

MECHANICAL GOODS.

No. 550,942.—Buffing-Wheel. Henry Carmichael, Malden, Mass.

In a buffing and polishing wheel, a core or center composed of an indurated molded mass of pulp fiber capable of being bored or turned, and a band or covering encircling the core and consisting of a continuous strip composed of layers of textile material and rubber vulcanized together and spirally wound into a plurality of coils with the layers of textile material and rubber at an angle to the periphery of the core or center.

No. 551,630.—Spraying-Nozzle. Frank Gray, Chicago, Ill.

In a nozzle the combination with a suitable shell having a flaring discharge opening, of a hollow cone having a hollow stem communicating with the interior of the shell, the cone being arranged within the flaring discharge opening so that the inner surface of the opening and the outer surface of the cone are substantially parallel, and a ball arranged in the hollow cone, the cone and shell being relatively adjustable for the purpose of varying the capacity of the annular space between them.

No. 551,938.—Atomizer. Charles L. Travis, Minneapolis, Minn.

The combination, with the nozzle, a rod centrally arranged therein, a conical plug arranged upon the rod and extending out beyond the throat of the nozzle, an adjustable nut on the end of the rod, and a spring arranged between the nut and plug, whereby the plug may be regulated according to the pressure of the water in the nozzle.

SPORTING GOODS.

No. 550,976.—Golf-Club. William T. Jennings, Toronto, Canada.

In a golf club, a head having back and front walls of resilient material, and end walls connecting the resilient back and front walls, whereby the rear resilient wall assists in sustaining the front resilient wall when a blow is delivered and also in giving a rebound, the club being open at the top and bottom of the walls.

No. 551,803.—Exercising-Machine. Alexander A. Whitely, Chicago, Ill.

An exercising machine comprising quadrangular pulleys supporting frames, each having pulleys connected to three of its angles and being suspended by the other angle, and a long elastic cord normally passing over all but one of the pulleys, and adapted to pass through or be removed from the pulley housing, whereby the machine may be inverted without changing the position of the pulley frames, the shape of the frames being such that the active pulleys in each set are substantially equidistant.

HARD RUBBER.

No. 551,230.—Composition of Matter for Insulating Purposes. Rufus N. Pratt, Hartford, Conn., assignor to the Johns-Pratt Company, same place.

An electrical insulating composition consisting of dense hard rubber, laminated mica, and fibrous asbestos combined as specified.

No. 552,480.—Hair-Pin. William Kiel, Butler, N. J., assignor to the Butler Hard Rubber Company, New York, N. Y.

A hair pin made of a plastic composition and provided with a centrally disposed metal core embedded therein exposed at each pin point.

MISCELLANEOUS.

No. 550,715.—Billiard-Table Cushion. Beyton H. Fogg, Somerville, Mass.

In a billiard table cushion the combination of a metallic strip embedded therein: with a guard of thin flexible material attached to the metallic strip and having a member extending above the metallic strip toward the front edge of the cushion whereby the shock of the ball upon the rubber will not be transferred directly to the junction of the rubber and the metallic strip but will be warded off by the member.

No. 551,543.—Cushion for Keys for Type-Writing Machines. Robert S. Graham, Newark, N. J., assignor to the Type-Writer Cushion-Key Company, same place.

In combination, a space-bar and a soft rubber cushion consisting of an upper member and side and end flanges whereby the upper member is supported on the space-bar, leaving an air space between.

No. 551,670.—Cushioned Horseshoe. Hiram H. Gibbs Indianapolis, Ind.

A horseshoe comprising a metal frame and a cushion secured thereto composed of rubber with long wires or fibers interwoven throughout the same.

No. 552,162.—Dental Syringe. William C. Middaugh, Easton, Pa.

In a dental abscess syringe, a pear-shaped metallic bulb of a size adapted to be manipulated inside the mouth of a patient and provided at its wide end and one side with an offstanding valve-neck disposed at an obtuse angle to the length of the bulb, a tubular syringe needle detachably connected to the small end of the medicine bulb, and a compressible air bulb having a tube connection with the valve neck of the bulb.

No. 552,399.—Rattle. George C. Smith, Fishkill-on-the-Hudson, assignor to the New York Rubber Company, Fishkill, N. Y.

As a new article of manufacture, a toy comprising a rubber body having elastic rings at its ends one of which is formed into a teething ring, and a rattle consisting of a casing having inclosed balls and an exterior groove, the casing being inserted in the other ring of the body and held therein by the engagement of the elastic ring in the exterior recess.

DESIGN PATENT.

No. 24,983.—Bicycle-Saddle. Charles D. Cutting, Chicago, Ill.

Claim.—The design for a saddle as shown and described.

TRADE-MARKS.

No. 27,380.—Rubber Goods. Harry E. Wagoner, St. Louis, Mo. Filed Nov 11, 1895.

Essential feature.—The word "Monarch." Used since November 1, 1895.

No. 27,488.—Sheet-Packing for Steam Joints, Gaskets, and the Like. Charles L. Ireson, Boston, Mass. Filed Oct. 7, 1895.

Essential feature.—The words "Blue Blood." Used since March, 1895.

No. 27,573.—Plastic Material for Waterproofing, Insulating and the Manufacture of Ornamental and Useful Articles. The Colophite Manufacturing Company, New Haven, Conn. Filed Nov. 25, 1895.

Essential feature.—The word "Colophite." Used since January 1, 1889.

ARE PATENTS WORTH ANYTHING?

TO THE EDITOR OF THE INDIA RUBBER WORLD: According to a writer in *Electrical Engineering* (Chicago), the recent editorial in your journal on "Our Unsatisfactory Patent System" voices "a now and then popular cry, which is no less ignorant because it is popular." While not doubting that you can fittingly dispose of the Chicago writer, I have been tempted, by the perusal of his defense of the policy of the patent office at Washington, to express my own views on the valuelessness of letters patent issued therefrom. It is no part of my purpose to claim that they do these things better in other countries; the foreign practice has nothing to do with this case.

No doubt the theory of the patent office, as claimed in *Electrical Engineering*, is that the sole test, in treating an application for a patent, should bear upon the novelty of the alleged discovery. Yet in the same article the Chicago writer, after asserting that "no other country in the world has equal machinery for such inquiry," says that our government "guarantees nothing, because *it cannot possibly know* that the thing has not been patented before." Then to what purpose is the scrutiny of applications, for which inventors must pay so roundly that the patent office now has a surplus of millions of dollars?

"It [the government] simply issues its certificate that the thing described within purports to be a new and useful improvement, and that the allegations are true as far as the patent office can ascertain." The Chicago writer states the practice precisely. And it matters not how deficient in novelty, or how contrary to the accepted dicta of science, or how palpably impracticable, or how often the same thing may have been patented already in America or Europe—a patent may (I do not say that it will) be granted at Washington. The result is that instead of "securing to authors and inventors" the benefits of their discoveries, as was intended in our constitution, the practice of the patent office has involved inventors and capitalists and lawyers in such a sea of doubt as to what is new that patents are indeed no longer respected in this country—either by intelligent men generally, as indicative of merit or novelty in a patented article, or by competitors in trade, restraining them from appropriating any discovery which may have been disclosed.

On the same day there were granted at Washington two patents, consecutively numbered, in the same class, identical except as regarded one ingredient in a chemical process, and in that respect differing less than would two recipes for boiling potatoes, one reading "salt to taste" and the other "add one or two pinches of salt." And in neither patent was any process disclosed not already in use under the supposed protection of older patents. Could any test for novelty have been applied here?

There lately returned from Washington a friend of mine, whose experience with the patent office extends beyond a quarter-century, who was unwilling to apply for a patent on what he believes to be a new discovery without an assurance that something similar had not already been patented. Rather than depend upon the regulation official scrutiny of the patent office, he expended a thousand dollars in having a private search made. So much for the opinion of an experienced inventor and patentee of patent-office methods.

But suppose that a patent should be granted. Departing from the spirit of the constitution, the government no longer "secures" to the patentee anything farther than the right to protect his own property in the federal courts against any unfriendly claim which it may be in the power of man to devise, the government thereby placing a premium upon dishonesty by the wide latitude allowed to those who attack patent rights in the courts. Everything is left, in the end, to the courts, and one may as safely predict the opinions of an unhatched canary as the decision of any court in the land where a patent is concerned. Two manufacturers of rubber pencil-tips once went to law over their respective patents and had spent about $16,000 apiece when a learned judge decided both patents to be valid and equally so. Then one of them was sued by a rival for infringement of patent and was strongly urged by his counsel—a lawyer of great reputation—not to contest the suit, on account of the weakness of his case, but he made a stand, merely as a matter of pride, and at the first hearing the court made a ruling in his favor. The same manufacturer still obtains a patent now and then, but he no longer defends them in the courts. If other people care to imitate his patented devices, he will not throw away money to prevent it.

The Chicago writer urges that the owners of patents occupy the same position before the courts as owners of property of any other kind. But is this true? The man who steals your watch *is* prosecuted at the expense of the state and is imprisoned for the crime, even if the stolen property should be regained by you. But he who steals your patented ideas *may*

be prosecuted at your own expense, and, if you should happen to win your cause in the courts, there yet remains the collection of any damages that may have been awarded to you, also at your expense, and without help from the government.

What, then, is a patent worth? As a guarantee of novelty, nothing. As indicating merit or the practicability of an invention, still less. As insuring protection by the courts or otherwise to an inventor's rights in his own discovery—it is too foolish to talk about. The only thing "secured" by a patent is the government's fee; no pay, no patent.

Yet are not patents bought and sold all the while? Certainly. There are still some people who believe that the government undertakes to rightfully protect inventors in their property, and who look upon the official letters patent in the light of a sacred contract, as they would upon a gold bond. Such people suppose a patent to be evidence of great intrinsic merit in the article to which it relates. Hence patents figure as assets of corporations with high-sounding names and fictitious capital, organized to line the pockets of promoters before the innocent investors have time to discover how empty is the bag they will have to hold. There have been so many enterprises of this sort, by means of which men have been induced to surrender their surplus cash to owners of patents—granted or pending—that it may be asked whether the government has not become an accessory to fraud through the laxity of its patent methods.

There are sellers of patents known to be worthless who do a thriving business. The patent system offers a profitable field, too, to patent solicitors. And there are reputable manufacturers who avail themselves of the opportunity which the government offers to them to label their goods "patented," in the hope of deterring some would-be imitators, although the same manufacturers may doubt their inability to sustain their patents in court. In these respects patents are valuable. But the real protection which the owners of important inventions get in this country comes largely from concealing the details of manufacture, whenever this can be done, from as many people as possible. What owner of a good India-rubber compound, for instance, does not feel safer by keeping it a secret than by entrusting it to Uncle Sam, under the forms of the patent law?

C. D. FROST.

THE RUBBER EXHIBITS AT THE CYCLE SHOW.

IT is generally admitted that the New York Cycle Show was a success. That is it was crowded with sight-seers to such an extent that only a portion could see intelligently, and there was such a multiplicity of wheels on exhibition, that the bicycle face took on an extra wrinkle in the effort to select the best from such a wealth of excellence.

The tire exhibits were of course the notable ones in the eyes of THE INDIA RUBBER WORLD man and received the most of his attention. Almost all of these were situated in the first balcony encircling the great hall, and overlooking the sea of exhibits, exhibitors and frantic souvenir hunters that thronged the lower floor. On entering the show the tire hunter naturally turned to the right, mounted a short flight of steps and was at once in the first balcony and facing the exhibit of the Manhattan Rubber Mfg. Co. of New York Here was shown the Simplicity No. 47 Tire, the invention of Mr. Elliott Burris. There was also in evidence a fine type of hose pipe tire, and specimens of pedals and other mould work that the company make for cycle builders. A point of interest was a neat exhibit of emery wheels, that received the attention of both bicycle builders and makers of special tools for cycle work. The exhibit was in charge of R. F. Badgley, and Wm. H. Heisser. Mr. F. Cazenove Jones, Prest. of the Co. and Mr. A. F. Townsend the Vice-Prest., were visitors to the show and made the exhibit their headquarters.

Further along was the exhibit of one of the youngest concerns in pneumatic tires, the Akron India Rubber Works (Akron, Ohio). Although the concern is new it was in the charge of one of its officers who is a veteran in pneumatics,—Mr. Frank Reifsnider. The tires shown were the "India," the "India A, B, C, D," and the "India Racer.

The Newton Rubber Works (Newton Upper Falls, Mass.) whose exhibit of the Straus tires came next in order, was a busy place and no seeker for rubber information got by there without a word from some of the enterprising young men who explained the merits of their goods. Mr. A. Straus, the general manager of the company, was at the front most of the time, and kept his five lieutenants up to the top notch of enthusiasm and effort. By the way, bicycle clubs should write the Newton Rubber Works concerning their offer of four bags of gold in connection with the use of the Straus tires.

The simple and popular repair kit for single tube tires made by the Hartford Rubber Works Co. (Hartford, Ct.) was not only shown at their exhibit but was so explained that no one of the great crowd in constant attendance could fail to understand just how it was done. The exhibit was under the general charge of the treasurer of the company, Mr. L. D. Parker, who was assisted by Messrs. Brandt, Parker, Marvel, Ward and Maynard. An unusual feature at this stand was the heavy pneumatic tires for horseless carriages, broughams, road wagons, etc. The regular tires for cycles were also shown and explained. They are the "No. 80, Standard Fast Road Tire; No. 77, Tire for All Around Use; No. 70, Tire for Rough Service; No. 75, Racing Fastest Tire on Earth.'

The Mechanical Fabric Co. (Providence, R. I.) showed the Flexifort and Conqueror tires, and as an indication of the good rubber that they used they had filled an inner tube with air until it had bulged out as big as a football, stretching the walls until they were as thin as tissue paper and still showed no leak. Mr. A. L. Kelley, the treasurer of the company, was at the show, the exhibit being in charge of Allen Aldrich and Arthur E. Friswell.

The American Dunlop Tire Co., New York, had a force of bright young men explaining the method of attaching and detaching the Dunlop tire. The name Dunlop, by the way, seemed to attract many people who in a misty way knew that the name was a famous one in connection with tires. The pamphlet on tires that was given away at this exhibit gave them more definite and evidently valued information about the famous inventor.

The monogram "M. & W." in electric lights called one's attention to the Morgan & Wright (Chicago) exhibit. Here and there was also a quiet suggestion that the M. & W. were "good tires." Instead of a pyramid of tires or a wall covered with them there was but one solitary tire in evidence. There were, however, plenty of men to talk that one. For as assistants to Mr. Wm. Herrick, were Messrs. Hall, Pelton, Stuart, Lennie, William Nash, Osterlich, Stadelman, Tullis, Alexander, Fenee, Cameron and Schoenstadt.

The New York Tire Co. (New York) showed three weights of hose pipe, and five weights of inner tube tires. Those interested in tires could not fail to profit by the explanation of the

"Restraining Jacket" principle upon which the company build their tires. For this they have built special machines to manufacture their fabric which is a seamless constructive diagonal thread fabric that is light, durable, strong and resilient. Mr. Frank White, the manager of the company, was in constant attendance, and was assisted by Messrs. Henshaw, Hotchkiss, Petree, Ainley and Sharpe. The section was most tastefully decorated and had hosts of visitors.

The New York Belting & Packing Co, Ltd. (New York), with their expressive motto, "Pioneers and Leaders," were a trifle withdrawn from the crush of souvenir hunters, but of those interested in tires none failed to find them. They showed both the hose pipe and inner tube tires that are famous under the name of "League Tires" as well as the "Minute Repair Kit" which, as was proved, will repair an inner tube tire without its removal from the rim. A feature of this exhibit was the continuous air tube that was used in the League inner tube tires and that does away with the bumping caused by butted ends. G. E. Lesley was in charge, assisted by Messrs. Balding, Johnson, Thomas, Kerns, and Bell.

The word "Vim" in electric lights called attention to the exhibit of the Boston Woven Hose & Rubber Co. (Boston) Here the Vim tire in all the glory of its "Floxine" coloring was shown. Of course everyday riders chose the black rim for their own use, but its gorgeous colored brother called forth many questions nevertheless. A feature of this exhibit that drew the attention of repair men and cycle clubs was the "Vim Tire Welder" which is illustrated and described in another column of this issue. Mr. E. H. Huxley expounded its merits, showed how it worked and wrote scores of orders for immediate delivery. Another feature of interest was the distribution of an elegant book entitled "*Bicycle Advice.*" Of course it was for advertising purposes, indirectly, but it was so well done and withal so valuable that there was a general rush for them and when other literature became cumbersome and was thrown away this was preserved. Mr. H. F. Hering of the New York store had charge of the exhibit. There were also on hand Messrs. Abbott, Weaver, Smith, Blauvelt, Sullivan and others. Mr. J. Edwin Davis, the treasurer of the company, and Mr. Willis Darling, sales agent, were also interested visitors to the show.

The Spaulding & Pepper Co. (Chicopee Falls, Mass.) had a fine exhibit showing the S. & P. tires for both road and track use. They also had the L. C. Smith tire, which they have been making for the past year. In connection with their exhibit was shown a very interesting novelty in tires, the "W. & P. Armored Tire," which they are also manufacturing and for the sale of which a strong company was lately organized in Buffalo, N. Y. This tire is a non-puncturable one with a flat tread. Mr. Pepper, the treasurer of the Spaulding & Pepper Company, was a frequent visitor to the show, his exhibits being in charge of Messrs. Hadley, Bailey, Christ, and Warson.

The Palmer Pneumatic Tire Co. in connection with their New York selling agents, The Columbia Rubber Works Co., had an extensive and interesting exhibit. The Palmer tire is so well known and has so many friends that their space was surrounded by an interested crowd most of the time. Catalogues of the Palmer tire, and of the Akron tires were in great demand. In the Palmer pamphlet is the announcement that the fabric in their tires will be a trifle heavier this year for road work. Mr. John F. Palmer, the president of the company and the inventor and patentee of the tire was a visitor to the show and in constant attendance. Messrs. Porter, Spooner and Shirley answered questions and entertained visitors.

The Combination Roll and Rubber Co. (Bloomfield, N. J.) exhibited a form of pneumatic tire that is simple in the extreme. It is a detachable tire and is made of stock that will stretch transversely but no other way and therefore cannot creep in the rim. Both of the Messrs. Greachen the proprietors of the company visited the Show. The exhibit was in charge of Mr. J. E. Mooney the patentee of the tire.

The Eastern Rubber Mfg. Co. (Trenton, N. J.) showed the the Rex, Climax, and Mystic tires. Their exhibit was in charge of Messrs. Herron and Raish.

The Indianapolis Rubber Co. showed a new tire known as the Indianapolis.

The Elastic Tip Co. (Boston) showed all kinds of bicycle sundries, together with the Anchor brand of rubber cement.

The Gormully & Jeffery Co. had a corner of their space set apart to exploit the "G. & J." tires.

The Diamond Rubber Co. (Akron, Ohio) had their tires shown in connection with the general exhibit of their selling agents Roger B. McMullen & Co., New York. Mr. E. L. Toy, Manager of the Diamond Co., was a visitor to the show.

The Henley Cycles for which the Peerless Rubber Mfg. Co. (New York) are agents, were well exhibited and found many admirers.

Parkhurst & Wilkinson's exhibit contained beside a host of sundries, the Saeger pneumatic saddle, and the North American tire for both of which they are selling agents.

A. U. Betts & Co. (Toledo, O.) had their Red Cross Vulcanizer at work all the time repairing tires.

The Lefebre Mfg. Co. (New York) exploited Schwerin's Safety Tire Clamp as a quick and successful puncture repairer.

Eugene Arnstein (Chicago) and the Eclipse Cement & Blacking Co., Philadelphia, showed rubber cement for rims and repairs.

For souvenirs the Hartford Rubber Works Co. gave away an eraser made like a cycle wheel with a rubber tire, the Mechanical Fabric Co. a court-plaster case, the N. Y. Tire Co. a morocco covered memorandum book and calendar, the B. W. H. & Rubber Co. "Bicycle Advice," The Palmer Tire Co. tiny sections of the Palmer tire.

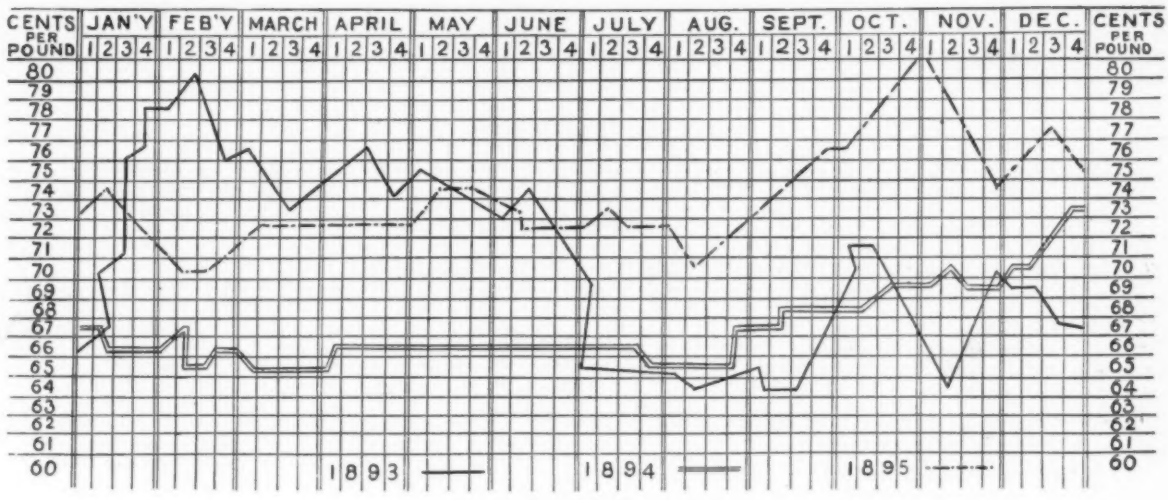
RUBBER STORES AS CYCLE DEPOTS.

A LETTER from the enterprising manager of the Czar Cycle Co., of Chicago, draws attention to the fact that the rubber stores throughout the country are becoming deeply interested in the bicycle business, and are rapidly selecting wheels for next season's sales. As an instance of this they cite their own experience. They have as agents W. D. Allen & Co., Chicago; the Sanders Duck & Rubber Co., St. Louis; Nott & Plant, Minneapolis, and C. S. Knowles, of Boston, all of whom are well known and successful marketers of rubber goods. This is as it should be. The bicycle is exactly the kind of side line that a rubber seller particularly in mechanical goods can handle, and that too without added cost in traveling. No other proof of this is needed than the fact that nearly all of the biggest and most energetic in this line are already pushing some good wheel.

ABOUT THE CHESTERTON COMPOUND.

TO THE EDITOR OF THE INDIA RUBBER WORLD: In your issue of April 10, I saw an inquiry from J. H. V. for the address of a manufacturer of genuine Chesterton compound. I presume he means Chatterton compound and as I have made this for many years I would be glad to have you send him my address,

E. P. KELSEY.



QUOTATIONS FOR ISLAND SPOT FINE PARA.

INDIA-RUBBER STATISTICS FOR 1895.

ACCORDING to the statistical sheets compiled by Messrs. Earle Brothers (New York), the output of India-rubber from Pará during the calendar year 1895 was 13.4 per cent. greater than in 1894 and 10.2 per cent. in excess of the shipments from Pará in 1893, which year until now has held the record. The growth of the Amazon rubber industry may be illustrated by comparing the exports from Pará at intervals of five years as follows:

Year.	Pounds.	Year.	Pounds.
1865	8,243,000	1885	29,310,000
1870	10,528,000	1890	36,300,000
1875	15,144,000	1893	42,068,000
1880	18,889,000	1895	46,363,000

The increase has been fivefold in thirty years, and the amount has doubled in twelve years. The imports of Pará rubber into the United States have increased in about the same ratio, but in 1895, for the first time, the takings from Pará in this country have been exceeded by Europe. While full details are not yet to hand, it is known that the total of India rubber imports of Great Britain, France, and Germany were larger in 1895 than in any former year, and a part of the excess in the case of each country undoubtedly consists of Pará grades. The production of African rubbers is also gaining ground, as well as their consumption in America, while the returns of Central America and East India sorts may be said to show little change.

The consumption of India-rubber by the United States and Canada by different years is indicated by this comparative table, the figures expressing pounds.

DETAILS	1893.	1894.	1895.
Imports to United States	36,780,000	32,797,000	36,250,000
Exports to Europe	1,600,000	875,000	725,000
	35,180,000	31,922,000	35,525,000
Add Stock January 1	2,725,000	2,322,000	3,182,000
	37,905,000	34,244,000	38,707,000
Less Stock December 31	2,322,000	3,182,000	1,251,000
Deliveries to Manufacturers	35,583,000	31,062,000	37,456,000

In the table which follows is an estimate of the amount of visible supplies of India-rubber in the world on December 31, 1895, which were smaller than at the same date in any year since 1882:

	Pounds.
Stocks in the United States	1,251,000
Pará grades	601,000
Central Amerian and Caucho	200,000
African and East Indian	450,000
Stocks in Europe	3,472,000
Pará grades	1,164,000
All other	2,308,000
Stocks of Pará at Pará and afloat	5,385,000
Total	10,108,000

[This excludes stocks afloat of all other than Pará sorts.]

The highest price recorded for fine Pará in 1895 is 81½ cents in November. So high a price had not previously been quoted since 1891, in April of which year there were quotations of 95 cents.

* * *

THE English rubber movement for the calendar year 1895 is of interest also for the reason that it breaks the record in that country. While the imports exceed those of the United States, the consumption there is less than half that recorded in the latter. The details for three years follow, the figures indicating pounds:

	1893.	1894.	1895.
Imports	32,857,776	33,874,512	38,212,816
Exports	16,710,736	19,176,304	22,678,320
Net imports	15,534,496	14,698,208	16,147,040

Great Britain being the principal handler and consumer of Gutta-percha, the movement of this material in a crude form in that country also deserves mention in this connection. Here are comparative figures for the same three years as above:

	1893.	1894.	1895.
Imports	4,534,880	5,246,752	5,387,088
Exports	832,160	893,200	1,404,032
Net imports	3,702,720	4,353,552	3,983,056

It will be seen that the combined English imports of crude India-rubber and Gutta-percha last year reached a total of 43,599,904. The figures above given for the United States include Gutta percha, but do not include the gum known as Pontianak, which is included in the government statistics of rubber importations kept at Washington, thus giving larger totals than the records kept by brokers and importers.

RUBBER FOOTWEAR CHANGES IN THE PAST FIFTY YEARS.

By John P. Lyons.

IF the popular overshoes of the last fifty years were to form in a procession and file by in chronological order, it would not only show the rapid development of the rubber footwear industry, but it would serve equally well as a measure of the growth of our national æsthetic taste.

The first rubber shoes ever worn in this country came from South America in 1820—a pair of very elaborate gilded rubbers, which a Boston sea captain brought home as a curiosity. The first serious importation for selling purposes was made five years later, and since that time to the present the rubber shoe has been an essential part of our domestic economy. These early South American shoes were exceedingly crude. They were made in this way: The natives moulded rough lasts of clay, dipped them into the sap of the rubber tree and dried them, one layer after another, in the smoke of the palm nut. Salem, Mass., was at that time one of the most aggressive business centers in the United States, and some of its shrewd people thought if they could not make the shoes they could make the next best thing,—the last. So they exported to South America a large number of maple lasts, which the natives took to very kindly, as an improvement upon the clay moulds. These dipped shoes were the only kind that proved serviceable up to the time of Goodyear's discovery of the vulcanization process in the early forties. They were to be sure about equally thick in all parts, vamps, soles and heels. They were, moreover, nearly all of the same size, and were unlined.

When Goodyear in 1843-44 had so far perfected his process that he could make shoes of vulcanized rubber the South American importations fell off, and people began to use shoes of American make, as they were more shapely, comfortable, and had the advantage of a lining. Moreover, they were made in regular sizes, although the introduction of the half size came at a considerably later date. These first American shoes were simply plain overshoes in shape, that is, the vamp and the counter were about the same height. They were very heavy and made the foot perspire most uncomfortably. To avoid this the "Sandal," an overshoe with openings cut across the vamp, was introduced. This, of course, gave the foot more ventilation, but it also let in the wet, and so its usefulness was limited. After a few years it was followed by the "Imitation Sandal" which did not have the openings but had imitations of them in the vamp, and was made much lighter than the "Over." This was very popular in the late fifties, and remains a standard shoe to-day. The Sandal generally with one strap, and sometimes with two or three straps, is still made.

There was one passing fad, or possibly we might with more propriety call it a "freak" of that day, which is worthy of notice, and that was the call for rubbers with a "duck bill" toe. This toe first narrowed and then flared out wider than the rest of the sole, at the same time being extended from one to three inches longer than the foot. Rubbers were made that way to fit the leather shoes worn at that time,—a most amazing style, as it seems to us in these days of pointed toes.

About that time, in the late fifties, a new overshoe came into vogue, which with various modifications, has remained popular to this day. That was the Arctic, invented and patented by Mr. T. C. Wales, and made exclusively for many years by the Wales-Goodyear Co. It consisted of a shoe with cloth outside and a cloth lining with a layer of rubber between. The most popular form of this shoe for many years was the "Congress" Arctic, with elastic goring in both sides. In those days every man old enough to vote wore high-legged boots; at least that was the regulation footwear, and these elastic gored Arctics went admirably with the boots, but when these boots went out of style the "Congress" Arctic went with them. The first Arctic made was lined like an ordinary shoe and had a slit down the vamp which, of course, let in the rain; that was superseded by the Arctic which had a flap buckling on the side, which in turn gave way to the Arctic used to day, in which the two sides buckle over the vamp, and which when made with snow-excluding gussets is waterproof to the very top.

The button gaiter—which remains popular to this day—came into being along in the fifties,—about 1855, while the "Alaska," an outgrowth of the Arctic, was of slightly later origin.

The "Croquet" for women, now the most popular of women's shoes, appeared about 1869, when the game of croquet first made its appearance and excited such a furore. It was introduced by the Candee Co. and was first called the "New Haven." This shoe was a modification of the "Over" in two particulars; it was cut higher at the heel and lower in the vamp. The "Over" which had been worn very largely up to that time, did not adapt itself as well to the French heels, which were beginning to obtain among American women, as the higher countered Croquet, which immediately became popular, and has remained so to the present time.

A few years later, in the seventies, a new rubber appeared which commended itself exceedingly, particularly to masculine wearers, and that was the self-acting shoe. When the large majority of male Americans had neither time to eat, sleep, or dress, it was very natural that the effort of pulling on a tight fitting rubber and taking it off again should seriously impair the popularity of rubber wearing. This new self acting shoe largely did away with this objection. It was made with a stiff counter and a stiff shank and with a rubber lining at the heel, so that it would cling to the leather shoe, and then a small spur was attached at the back so that the rubber could easily be removed by the other foot. This shoe, which went on of its own accord and could easily be sprung off by the foot and yet remained secure when walking, became immediately popular, and still remains the prevailing men's shoe. The "Clog," it might be said in passing, was an outgrowth of the self-acting shoe. The rubber lining at the heel served to hold the rubber in place, and permitted a much lower cutting of the vamp than had hitherto been possible. The "Clog" has proved to be a very popular shoe, and is much favored by people who are in a position to have a varied stock of footwear for various kinds of weather, as well as by those who wear rubbers solely to protect the foot from the dampness of the ground.

One extreme very often leads to another, and the French heel that necessitated the "Croquet," raised a great stir among the hygienists, and they all came out flat-footed—so to speak—against it, with the result that a great many women, who themselves stalked about on French heels, wanted shoes for their daughters and young children that were absolutely without heels. This, of course, called for a heel-less rubber, which appeared along in the latter part of the seventies, and are still popular and likely to remain so, for misses and children.

In the early eighties the Candee Co. made a distinct departure in the manufacture of rubber footwear, bringing out a very high-vamped rubber, the invention of one of its selling agents,

called the "Elm City." The vamp of this shoe came up to the ankle, and afforded perfect protection in the most driving rain, but like many another good thing, it was a little ahead of the public, and it did not receive the instant favor it deserved. Possibly this may be accounted for in a certain measure by the fact that those first rubbers made after this pattern were made rather tight across the instep. Whatever the cause, this shoe did not enjoy its present wide popularity until some years later when another company made a high vamped rubber much like the earlier Candee pattern, but a little more roomy across the instep. The other companies, perceiving the excellence of this shoe, began to make it, and now under a variety of names,—"Storm Slipper, "Protection Slipper," "Beacon Slipper," "Sensible Over," etc., it is one of the most popular styles of rubber footwear, especially with women.

The development of the toe in rubber footwear is quite interesting. From the extremely broad-toed rubbers of the fifties, rubbers grew more and more moderate in that particular until about twenty years ago the comparatively narrow London toe came into vogue. This predominated for fifteen years or so, until about three or four years ago, when the extremely pointed leather shoes demanded a counterpart in rubbers. Now, therefore the principal rubber companies are all making rubbers in razor and needle toes. One effect of these narrow toes has been to play havoc with all standards of size, for the narrower the toe the longer the rubber has to be made to fit the same size of foot. For instance, an extremely narrow toed No. 8 rubber is sometimes as long as a regular toe No. 11.

The rubber boot is an American product. There is no record that any rubber boot was imported from the South American countries. Boots began to be made in this country at the same time with shoes. Hayward, one of Goodyear's contemporaries and his chief antagonist for inventive honors in the rubber line, devised the hard heel back in the forties, and from that day to this the rubber boot has been a popular article of footwear, particularly in the country where there is much snow in winter, and especially among farmers and fishermen, whose callings keep them out of doors in the worst of weather.

The Lumbermen's Shoe, now so popular in Maine and the Northwest, and wherever there are trees to cut, is an outgrowth of the old women's buskin made back in the fifties—a laced shoe lined with canton flannel and made to wear directly over the stocking. This shoe is fastened with one or two buckles or by lacing through eyelets or iron loops, but the one buckle "Perfection" worn over a felt boot or woolen sock, has for many years been the prevailing shoe.

Different localities with different conditions call for a different style of rubber footwear. For instance, in the Southwest, where the mud is dense and sticky, and always pulling at the pedestrian's leg, the ordinary rubber is very liable to be pulled off and lost. To avoid this rubbers have been made with a strap coming over the ankle. This, of course, takes more time to adjust, but when the rubber is once on, it is on to stay. Various other devices have been contrived for holding the rubber shoe on the leather shoe, but the strap seems to have been the most successful.

The most popular general styles of rubber shoe to-day for feminine wear are the "Overs" and "Croquets" both in heavy and light weights; the high vamped rubber for driving rains, and cloth-topped gaiters for the snowy days of winter; while men like self-acting "Overs," and if they live where there is a great deal of snow, and where every man has to be his own snow plow, they affect the buckle Arctic.

Of course, there is a great variety of footwear made at the present time. Each one of the big companies makes over a hundred different kinds, but if you had the privilege on the next stormy day of stopping the great American public and making it show its foot, you would find that these five varieties—the "Croquet," high-vamped stormy day shoe, the Gaiter, the Self-Acting Over and the Arctic,—would lead all the rest.

RUBBER IN THE DOMINION.

CANADA imported during the fiscal year ended June 30 last, manufactures of India-rubber and Gutta-percha worth $393,448. To show the gradual decline of imports of his character a table has been prepared, thus:

	Value.		Value.
In 1880	$723,685	In 1892	$656,921
In 1889	843,692	In 1893	696,020
In 1891	806,207	In 1894	519,296

The Canadian census reports for 1890 have been printed—a little late, and yet more promptly than those of the United States for the same date. The figures which they contain in regard to the India-rubber industry in Canada make possible the following comparisons:

	1870.	1880.	1890.
Number of rubber factories	4	4	15
Number of employés	510	605	1224
Wages paid	$ 83,297	$177 362	$336,018
Cost of materials	$357,702	$478,104	$1,395,977
Value of products	$502,615	$771,000	$2,001,040

The census for 1890 embraced for the first time inquiries respecting the capital employed in manufacturing, with the following result with regard to the India-rubber industry:

Fixed capital—		
In land	$181,000	
In buildings	365,000	
In machinery and tools	427,025	
		$ 973,025
Working capital		1,339,033
Total		$2.312,058

The employés in 1890 were divided, as to sex, between 518 males and 706 females, of whom 21 were boys and 32 girls under sixteen years of age.

RUBBER-HEELED SHOES IN THE ARMY.

TO THE EDITOR OF THE INDIA RUBBER WORLD: In regard to the article on "Rubber Heeled Shoes in the Army," published in your number for November 10, I would like to ask whether you have not made a mistake with regard to the parties furnishing them. We supplied the quartermaster-general with 100 pairs of the D. A. McDonald rubber heel-lift last February, and have since received from P. J. Hallahan, Philadelphia, for 500 pairs to be used on army shoes. C. B. TEBBETS.

[THE McDonald rubber heel-lift, for which Mr. Tebbets is general agent, was illustrated and described in THE INDIA RUBBER WORLD of February 10, 1895.—THE EDITOR.]

ABOUT SULPHUR POISONING.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The question has lately arisen whether there is such a thing as sulphur poisoning in rubber factories. Can you give me any information with reference to this? F. G. L.

[AS far as we know we have never heard of any sulphur poisoning in rubber facteries. There may, however, be such a thing, but we are inclined to think it would more likely be lead poisoning.—THE EDITOR.]

TWO OF GEORGE H. HOOD'S LIEUTENANTS.

MR. N. LINCOLN GREENE, whose features are so excellently shown here, is probably as well known to the large mackintosh buyers as any man of his age in the country. He was born in Auburndale, Mass., was educated at the public schools, and finished at the Boston Latin School. His first business venture was in the commission house of Jos. W. Woods, where he learned something about cotton goods.

N. LINCOLN GREENE.

From there he went with the Pará Rubber Shoe Co. He remained with that firm until the death of A. L. Coolidge, its president, when he resigned his position to go with the Boston Rubber Co. During his connection with the Pará Co. he was brought in close contact with Mr. Coolidge, and as a result became deeply attached to him. This was so marked, and the family appreciated it so fully, that at his employer's death Mr. Greene was intrusted with the delicate task of fully arranging the last sad rites.

His first engagement with the Boston Rubber Co. was as junior salesman and order clerk, where he had excellent training on the general stock, as well as under Mr. E. I. Aldrich, the selling agent for rubber shoes. His active work on mackintoshes began when Mr. William H. Corner, lately deceased, grew too ill to fully handle his old routes. From April to December, 1894, he traveled as Mr. Corner's assistant, and in the spring of 1895 was forced by the latter's death to assume the whole route. This gave him full charge of the large buyers in the Middle, Southern and Western States as far west as Omaha. Among them Mr. Greene is known as a popular, genial salesman, and is one for whom they do not hesitate to predict a future full of success.

MR. WALTER A. CLAPP, the New England manager of the mackintosh department of the same company was born in the Pine Tree State in the city of Augusta. He attended school there and also in the city of Bangor. Leaving school at an early age he started to learn the confectioner's trade. It did not afford the opening that he wanted, however, so in 1884 he came to Boston and secured a position in the store of C. M. Clapp, the proprietor of the Ætna Rubber Mills. He worked here for four years and then went with the American Rubber Co. where he was head stock man in the wholesale department. In 1891 he went with the Boston branch of the Hodgman Rubber Co., as salesman for northern New England. All of this experience in general rubber goods was of special value and led up to his acceptance of his present position which he fills with credit to himself and his house.

WALTER A. CLAPP.

IN fitting high-cut rubber shoes the dealer should warn ladies with extra high insteps that the shoe is liable to break, and that it will not be the fault of the rubber either. The pressure brought to bear on the vamp in the act of stepping when the rubber is too tight, is too much for anything in the line of rubber to long resist.

INDIA-RUBBER CEMENT.

BY GEORGE B. SCOTT.

THIS article is one which is not much heard of in the din and hurry of business life, but the fact remains that it is coming more and more into use—that methods of manufacture are improving and that in some trades it is now an indispensable adjunct to their business. It seems strange that rubber cements are not more extensively advertised, as there are undoubtedly many new fields which would thus be opened for them. Consumers generally are not aware that of the many articles which go to make up an ordinary leather boot or shoe, rubber cement is not the least important factor, yet it has grown into such general use in this trade, that it serves to keep several large cement factories busy.

Another line in which considerable is used is the hat trade. It is used here to cement the lining to the felt, ordinary mucilage being useless for the purpose, as the felt and cloth would become saturated with it, while rubber will remain on the surface. The bicycle trade, however, is well on the way to surpass all other avenues of consumption. Slowly, but surely, it is learning the superiority of a rubber cement for rim purposes over the old dry pitch cement.

This latter article is cheap, but far from satisfactory, as a careless workman can, by slipping the heated pitch, destroy the appearance of a tire, and the different weathers affect it seriously, causing the cement to become hard and brittle and thus lose its adherent qualities.

With a good liquid rubber cement, spread evenly and thinly, and with sufficient time allowed for the solvent to evaporate, no such results can be experienced, as the pure rubber left is not affected by any weather conditions, and the tire cannot creep, owing to its elasticity and adhesive qualities.

Many bicycle manufacturers have experimented with so-called rubber rim cements and found them worthless, owing probably to inferior rubbers and other cheap articles in their make up. The fact that there are such articles on the market is to be regretted, as it only serves to prejudice the bicycle man against the really better stock, which a few manufacturers are now making for this purpose.

Every rubber manufacturer cannot make a perfect rubber cement, and a good many cement manufacturers have yet to learn how to make a good rim cement, although their stock for other purposes may be excellent. However, a large number of bicycle manufacturers are now using the best brands, and the consumption is largely on the increase. This cycle trade, therefore, it will be seen, is likely to increase the consumption of crude rubber through another source than the manufacture of tires.

Trade journals, newspapers, etc., are often requested to print information as to the making of rubber cement. One lately noticed was in an almanac which stated that anyone desiring to make a rubber cement could easily do so by purchasing a few ounces of red rubber and dissolving the same in a certain quantity of chloroform. Whether or not this is an efficient composition we do not know, but it goes to show the ignorance in which the ordinary person is left by lack of judicious advertising—as it is a much easier plan to buy a five or ten cent tube of cement from any bicycle repair shop, which would do all the work that an ordinary householder would want of it.

There is no doubt that the future of this article is capable of largely increased usefulness and it certainly would pay manufacturers to inquire into the subject further. The subject has taken long years of study and experiment to bring to its present stage and there is no doubt but that it still affords possibilities of much greater development.

THE ALLING RUBBER STORES.

THE two exclusively rubber stores at Bridgeport, Conn., have been bought by N. E. Alling, lately of Norwich, Conn., and consolidated under the style of the Alling Rubber Co. One of these, the Goodyear Rubber Store, had been in existence for about twelve years, with several changes of management and was for awhile conducted by R. F. Way & Co., the head of the firm being a son of a leading hardwareman of Hartford, but latterly it was managed by Ellison & Middlebrook. The second of the two stores was opened about three years ago and since conducted by A. R. Lacey as the Bridgeport Rubber Store, at No. 139 Fairfield avenue. He is now devoting himself to the hardware trade.

Mr. Alling is located at the former stand of Ellison & Middlebrook, No. 465 Main street. A result of the change that is at once apparent is the substitution of one well-stocked store for two less fully stocked. It is the belief of Mr. Alling, supported by an experience of seven years, that there is a place in trade for the exclusively rubber store, regardless of the attempts of dry-goods and other establishments to attract buyers of rubber goods. Beginning with little capital, he and his brother have made money in selling rubber goods exclusively at Norwich, the population of which does not exceed 25,000. That of Bridgeport is 60,000 or more, and the location of the city is such as to make it the buying center of a much larger territory than that surrounding Norwich. Rubber goods are handled to a greater or less extent in Bridgeport by such stores as usually handle them in other cities, but this has not prevented a steady demand for rubber footwear, waterproof clothing, druggists' sundries, and the like at the stores devoted to these goods exclusively.

Connecticut is a good buyer of rubber boots, which are extensively worn by farmers. Motormen on the innumerable trolley cars in the state wear arctics and rubber mittens. Fishermen and boatmen on the rivers wear oiled clothing, which is kept in stock in the rubber stores. The store at Norwich above mentioned is conducted by W. S. Alling, also as the Alling Rubber Co., though the two concerns are, for the present at least, separate. Both stores, in addition to their retail trade, do a jobbing trade in rubber footwear, handling principally the American and Woonsocket lines.

THE GATHERING OF CAUCHO.

A VERY interesting account of the manner of gathering India-rubber along the Rio Javary, which forms the dividing line between Peru and Brazil, and is a tributary to the Amazon, is given in *Chronique Industrielle*. The whole of the low land abounds in caoutchouc trees, which are of two varieties, "caucho" and "jebe" [*Hevea*], from which the sap is extracted by different methods. The first-named tree is cut down, while incisions only are made into the bark of the latter. The entire sap from the trunk and roots of the felled caucho tree is collected in a depression or hole in the ground; the coagulation is produced by mixing it with a combination of soap-water and the sap of a climbing-plant. The tapping of a caucho-tree would be useless, as the incisions would so damage the tree that a future yield of sap would be impossible. The system of felling trees is of great benefit to the younger trees, which had but a meager chance of existence in the shade of the older trees, but, on receiving sufficient room and air, show a rank growth. Every eight years a *cauchal*, which is the name given to the location where the caucho-trees grow, may be harvested.—*Gummi-Zeitung* (*Dresden*).

DISCOVERIES OF RUBBER IN UPPER BURMA.

THE report of W. F. T. McHarg, an assistant conservator of forests in the Upper Burma states that the rubber from the west of the Mindu hills comes from the *Ficus elastica* and not from a creeper as was generally supposed. The most interesting point in this discovery is that heretofore it was not believed that this tree flourished in such low latitudes, though the major part of the Burmese rubber output has always been known to be the product of the *Ficus* trees. As a matter of fact exploration does not point to any great increase in the output of rubber from the Mindu district but the news is of extreme interest from a botanical standpoint.

The report of the valuation survey throughout that country as published in the *Indian Forester* is of great interest, especially the portions that treat upon the chats with the heads of different villages who are but just learning that rubber is valuable but do not know how to gather it. Those who have learned the work, however, are intelligent enough to appreciate that the trees must be allowed rest between the tappings, and that the incision must be such that the wound may heal easily. The trees are all tapped in cold weather, as then the yield is best. There are only a few men in a village who are expert enough to do the work, as it necessitates a great deal of climbing. They tap not only the aërial roots but the large branches; indeed, anything that is large enough to bear a cut.

INDIA-RUBBER IN MADAGASCAR.

THE rubber supply of Madagascar is likely to receive increased attention as one result of the success of the recent French expedition in enforcing the disputed protectorated over that island. It is reported that the French government have begun already to plan a scientific mission to Madagascar with a view to a study of its natural resources, and India-rubber probably will be found to be the most valuable raw material available. With active French merchants in the lead, instead of the Hova natives, a revolution in the commerce of the island ought to be expected. By the way, the last has not been heard of the Waller concession at Fort Dauphin. The ex-consul is still in a French prison, but the activity of the American government in his behalf has been such that his release may yet be looked for, after which Waller will seek to protect his interest in the grant of rubber lands which was one of the causes of the French movement against the Hovas.

PARA RUBBER IN THE STRAITS SETTLEMENTS.

NOT alone in coffee are the Straits Settlements becoming interested, but also, it seems, in respect to the cultivation of rubber. The Ceylon *Observer* has received a visit from the proprietor of a plantation in Lower Perak on alluvial riverside soil, where there are either planted, or about to be planted, some 500 acres of Pará rubber trees. The progress of the clearing, and the eventual harvests of rubber made by the experimentalist, Mr. Baker, will be watched with interest. In the past two years, however, a good deal has been done in Pará rubber in Ceylon, especially in the Kalutara and other low-country districts.

CANADIAN RUBBER-SHOE COMPANIES.

A SUBSCRIBER to the *Canadian Shoe and Leather Journal* (Toronto) writes to that paper: "Would you kindly inform me how many rubber companies are doing business in Canada, and if there is a company known as the Maple Leaf Rubber Co., for which I saw an application in the Ontario *Gazette* some time ago? Was the charter granted? If not, could you give me the reason why?" The editor's answer follows:

There are three rubber companies doing business in Canada — The Canadian Rubber Co., of Montreal; The Granby Rubber Co., of Granby, Quebec; and the Rubber Shoe Manufacturing Co., Limited, of Toronto. The last-named company makes a brand known as the "Maple Leaf," but there is no company called the "Maple Leaf" in existence. We understand application was made for a charter for a company called The Maple Leaf Rubber Co. on the part of members of The Rubber Shoe Manufacturing Co., but it has not yet been granted, pending the suit now in court involving members of the company referred to.

TRADE AND PERSONAL NOTES.

THE Cycle Show Number of the *American Wheelman* is one of the finest and most ambitious efforts that that live weekly has yet attempted. It has 308 pages, is profusely illustrated, and is brimful of news, gossip, and cycle information of all sorts. The cover in colors, depicts a charming wheelwoman, while in the background rises the lofty tower of Madison Square Garden where the show was held.

=The Non-Puncturable Pneumatic Tire Manufacturing Co. (New York) have been incorporated with $1000 capital. The directors are S. C. Boehm, C. B. Boehm, and Max Boehm.

=The Norfolk Rubber Co., Boston, are reported to be desirous of locating at Concord, N. H., and the town board of that place have had under consideration a petition for an exemption from taxation for the benefit of the company.

=The Canadian Rubber Co. of Montreal recently had a successful auction sale of 4000 cases of damaged and otherwise depreciated rubbers. Their catalogue for the current season shows some new items in rubber footwear. A nice thing for spring trade stocks is the tennis balmoral, with rubber foxing soles, and heels. The uppers are tweed buff, checked, or black in color. The growth of this industry in Canada is illustrated by the fact that whereas the catalogue of this company in 1877 embraced only fifty-six different lines, that for 1895 contains 184 lines, over a hundred of which are made in three different toes and two linings, besides a good many made on a greater number of toes.

=Emanuel Rosenthal, doing business at Buffalo, N. Y., under the firm name of the German-American Mackintosh Co., has made a general assignment for the benefit of his creditors to Samuel Weill. The only preference is in favor of the employés.

=The board of trade of Meriden, Conn., have received a proposition from parties claiming to control important inventions in machinery for the manufacture of woven fire-hose, who desire a location for the establishment of a factory to be worked on a new system. They state that there are only eight manufactories in this line in the United States and none elsewhere; that machinery for making rubber-lined woven hose cannot be bought; and that each of the eight concerns has machinery invented and constructed for its own plant. Hence it is urged that the new enterprise will be a good investment, on account of the limited competition.

=The Clayton Air Compressor Works, Havemeyer Building, New York, report the recent sale of a large Duplex Steam Actuated Air Compressor of their latest improved pattern, to the Pennsylvania Railroad Company, for the various applications of this power in their Altoona shops. They also have orders for several large Compressors from other railroad companies for the shop uses of compressed air, and are doing a large business in smaller compressors, for testing and inflating hose and bicycle tires and for supplying crude oil burners.

=The plant of the Parisian Rubber Co. (Akron, Ohio), reported in the last INDIA RUBBER WORLD to be in trouble, was sold by the sheriff on January 20 to Harry Templeton, the largest creditor, for $200.

=At the annual meeting of stockholders of the Derby Rubber Co., on January 27, the old directors were reëlected. This would indicate that no change in the policy of the company is contemplated; also that there has been no change of status of the pending litigation growing out of the objection of some of the stockholders to the terms of the lease of the company's plant to the United States Rubber Reclaiming Works.

=The plant of the New Jersey Rubber Co., manufacturers of reclaimed rubber, at Lambertville, N. J., was burned on Sunday night, January 26. The loss is fully covered by insurance. On the fourth instant the proprietors contracted for the erection of a three-story brick building to replace the old frame building. The contract calls for the floors to be laid within twenty days, and the building to be under cover within thirty days, with a forfeit by the contractor of $25 per day for each and every day that this portion of the work is unfinished. The proprietors expect to resume the manufacture of reclaimed rubber about the middle of March.

=Samuel N. Williams, president and manager of the Lycoming Rubber Co., has been nominated by the Republicans of Williamsport, Pa., for the office of mayor of that city. The election is to take place on February 18, and it is reported that the chances are good for his success. While Mr. Williams has always taken a deep interest in the affairs of his town he has not hitherto held any political office other than that of councilman.

=The new office building which has been added to the plant of the Hartford Rubber Works Co. is considered one of the most attractive of its class in Hartford. The exterior is of red pressed brick, with trimmings of granite. The main offices are trimmed and finished in oak, the wainscoting, ceilings, and mantelpieces, as are also the private offices of the treasurer and secretary, which are finished in an even more elaborate manner, having large open fireplaces, heavy wrought-iron chandeliers, and desk furniture of the most attractive and convenient kind. The furniture and desks in all the offices are also of heavy oak, matched with the fittings.

=The retail rubber-goods store of Edward W. Holt, No. 71 Broadway, Brooklyn, N. Y., was the scene one night recently of a fire started by a boy dropping a lighted kerosene lamp. The damage was reported at $1000.

=The Woonsocket Rubber Co.'s Millville factory was shut down at noon Friday, January 15, and the "Alice" mill, at Woonsocket, at the close of work on Monday. The former employed about 1000 hands on boots and the latter 1300 hands on shoes.

=The Boston Rubber Shoe Co.'s two factories, at Edgeworth and Fells, employing 3000 hands, were put on three-quarter time on January 20.

=The Meyer Rubber Co. (Milltown, N. J.) closed their factories before the holidays, resuming work on January 13.

=The annual meeting of stockholders of the Chicago Rubber Clothing Co. was held at Racine, Wis., where the factory is located, on January 18, 1483 shares being represented. The former directors were reëlected, viz.: Joseph Miller, William T. Emerson, C. H. Lee, J. Walrath, L. J. Elliott, and Mrs. Emma V. Laughton. The officers were next reëlected—Joseph Miller, president; Emma V. Laughton, secretary-treasurer; and George S. Andrus, superintendent. A dividend of 10 per cent. on the business of 1895 had already been declared and paid on January 10.

=Notice was posted at the works of The Boston Rubber Co. (Franklin, Mass.) on January 23 of a shut-down, and the last department was closed on the 28th.

=Mr. Fred. W. Jenkins, salesman for the Boston Rubber Co., will extend his routes this season into New York state.

=It is said that Commissioner Roosevelt of New York favors the universal wearing of identification tags so that the police may more speedily assist those who are injured or communicate with the friends of those who are killed. The samples submitted to him are of hard rubber, than which of course nothing could be better.

=Our thanks are herewith extended to Mr. Albert B. Beers, 58 William street, New York, for a complete statistical table covering the imports of Pará rubber for the last five years.

=J. D. Pierce, president of the Massachusetts branch of the American Federation of Labor, and John H. Murray went to Hudson recently and organized Union 6609 of the Federation of Labor. The new union has a membership of between 175 and 200 and is composed of rubber workers, nearly all being women.

=Mr. W. H. Evans, formerly with the Birnbaum Rubber Co., has accepted a position with the Boston Rubber Co., and will sell goods from Chicago.

=The Celluloid Co. (New York) have established themselves in the new building on Washington square which stands on the site of the Asbury Methodist church, long one of the landmarks of the city. They have leased for ten years this large seven-story building, all of which will be occupied by their offices, store, and warerooms.

=The J. F. W. Dorman Co. (Baltimore) are said to have shipped vulcanizers for rubber stamp making to India, Australia and South America.

=R. H. Smith, of The R. H. Smith Manufacturing Co., a prominent firm in the rubber-stamp business, has been elected a member of the board of public works of Springfield, Mass.

=Henry F. Knowles, Boston agent for the Globe Rubber Works, sends THE INDIA RUBBER WORLD a photograph of his fine store front at 111 Congress street, Boston.

=The four page colored insert of the Peerless Rubber Mfg. Co. in this issue is an evidence of enterprise and up to-dateness which speaks for itself.

=Mr. H. B. Cobb, manager of the Chicago Electric Wire Works (Wilmington, Del.), called at the office of THE INDIA RUBBER WORLD recently and described in detail the process by which he makes garden hose in 500 feet lengths, and with a perfectly smooth surface. The process is exceedingly original and eminently practical.

=The Goodyears' I. R. Shoe Co. (Naugatuck, Conn.) are so rushed with orders that they are temporarily using a part of the old plant of the G. M. R. Shoe Co.

=The New Jersey Car Spring & Rubber Co. (Jersey City, N. J.) have a brass goods department where they keep in stock the latest and best types of nozzles, couplings, sprinklers, etc., so that there is no delay in filling large orders for hose all ready for use.

=Morgan & Wright (Chicago) are on the market with a vulcanizer for tires to be used in cycle depots and by repair men.

=A recent fire at Aurora, Ill., destroyed the carriage-shop of The C. L. Pritchard Co., including $10,000 worth of carriage cloth.

=The Dubuque Rubber and Belting Co. (Dubuque, Iowa) handle all kinds of rubber goods, and manufacture rubber stamps. They were established and incorporated in 1883 and now occupy a three-story building 24×110 feet. Peter Kiene is president and Paul Kiene secretary-treasurer.

=It is reported that all the remaining rubber machinery, lasts, etc., in the old factory of the Colchester Rubber Co. (Colchester, Conn.) are about to be removed, and the premises put into condition for sale.

=The Standard Rubber Corporation (Brockton, Mass.) held their annual meeting on January 15 and elected as directors F. B. Pennington, B. J. Remich, D. J. Pierce, E. Gately, and Calvin Austin. The officers elected were: F. B. Pennington, president; Calvin Austin, vice-president; H. B. Pennington, secretary; E. L. Roy, treasurer. Heretofore W. W. Cross has been president of the company, with F. B. Pennington vice-president and general-manager. Earlier in the month a 3-percent. dividend was declared payable on and after January 15.

=The Monarch Rubber Co. (Campello, Mass.) reëlected their officers on January 14: William Rapp, president; John Thomas Robinson, manager; Ziba C. Keith, treasurer; Dr. N. C. King, clerk.

=The trust-deed filed by the Peters Rubber and Supply Co. (St. Louis), about the time of the death of President Peters, in December, has been attacked in the courts by creditors not named in that instrument. The Manhattan Rubber Manufacturing Co. (New York) are creditors of this class, and they filed an attachment suit for $9451, of which $1516 was past due. The preferred claims amount to about $50,000, principally in favor of St. Louis banks.

=The Kokomo Rubber Co. (Kokomo, Ind.), though delayed by the arrival of their machinery when due, began the new year by warming up their 500 horse-power engine and are probably now in complete operation in the manufacture of tires. Their first completed tires were turned out on January 20.

=The National India Rubber Co. (Bristol, R. I.) have substituted wire rope for cog-wheels in the gearing of their new calender-room, by which they hope to avoid any repetition of a recent breakdown.

=A fire in Brooklyn, N. Y., on January 13, caused a loss of $15,000 to Nevins & Co., dealers in India-rubber and leather goods, at No. 629 Mytle avenue.

=The new Akron India Rubber Co. (Akron, Ohio), defendants in the action brought by The B. F. Goodrich Co., have filed an answer, denying that their object in adopting this name was to mislead the public or to interfere with any other company. The Goodrich company, who claim to receive thousands of letters addressed to the "Akron Rubber Co.," it is reported, will carry the matter to the highest court in the land if they are not successful in the lower courts.

=The latest annual report of the Connecticut bureau of labor statistics makes a good showing for the industries of that state. The India-rubber industry is the only one showing a decrease of wage-earners as compared with the preceding year, which is due probably to the removal of the rubber-works from Colchester.

=Citizens of Gloversville, N. Y., are hopeful that a certain western manufacturer of rubber clothing—not named in the published accounts—who wishes to be located nearer to the seaboard, will remove to that town.

=The fire commissioners of Bridgeport, Conn., have asked for an appropriation of $5600 for the purchase of new hose during 1896.

=John M. Washburn, of Lowell, Mass., who has had much experience in the handling of rubber goods, has lately opened a general rubber store in that city.

=The stock and store-fixtures of the Brockton (Mass.) Rubber Co., whose failure was reported last month, were sold at auction on January 10 to J. Francis Hayward, of the Cable Rubber Co. (Boston.) The price paid was $495.

=The National India Rubber Co. (Bristol, R. I.) will not employ hereafter boys or girls under fifteen years of age. This order went into effect on January 4, prior to which there were girls under fifteen at work in the shoe department.

=The Metropolitan Rubber Co. have erected a pumping-station at their factory at Wallingford, Conn., for the purpose of raising from the lake on the west of the factory most of the water to be used hereafter.

=It is reported that Frank L. Kryder, who has been interested in the bicycle-tire business in Akron, Ohio, though engaged in the seed business, has disposed of his interests there and gone to Peoria, Ill., to become connected with the Peoria Rubber Co.

=The Boston Woven Hose and Rubber Co. will be represented this season in Chicago by Robert B. Abbott in the sale of their bicycle-tires.

=The Pneumatic Tire Co., Limited, of Dublin, who are the manufacturers of the Dunlop tires, report a trading and royalty profit for their last fiscal year of £200,877 10*s.* 5*d.*, on an issued stock of £250,000 in ordinary shares of £1, and £50,000 in 6-percent. cumulative preference shares. In addition to this profit, £75,000 were realized during the year from the sale from the treasury of 25,000 unissued £1 shares at £3 premium, or £4 per share. The latter amount has been set aside as a special reserve fund. Of the year's earnings, £85,000 were devoted to the general reserve fund. It is suspected that the immense reserves of the company are being planned, either for the purchase of important patents, or for fighting to the bitter end the patent litigation in which the company are already involved.

=The Frankfurter Asbest-Werke, Louis Wertheim & Co. (Frankfort o/M., Germany), have begun the erection of an additional factory, situated on the Rothen Hamm, near Frankfort. It is estimated that on its completion 400 hands will find employment there.

=It is said that Mr. Herbert Barrows formerly of the firm of Barrows & Dowse, founders of the Chauncy Rubber Co., has secured the plant at Reading, Mass., formerly owned by that company and will engage in the manufacture of bicycle tires.

=The Sterling Rubber Co., 111 Duane street (New York), has been purchased by the Enterprise Rubber Co. Mr. C. H. Bishop, who started the company is retained as manager of the clothing department, and successfully pushing spring rates.

=The New Brunswick Rubber Co. (New Brunswick, N. J.) are about to start up their factory on bicycle tires. Mr. Phelps formerly of Phelps & Dingle, and well known as an inventor and practical manufacturer of tires will have full charge of the plant.

=Mr. Geo. W. Powers, President of the Coronado Rubber Co., New York, has purchased the sloop yacht *Notos* of Oliver C. Stevens of Boston. It is his intention to spend the greater part of the coming summer cruising about the Atlantic coast.

=The Peerless Rubber Mfg. Co. (New York) have secured ample warehouse room in the new fireproof Kaestner building in Chicago and put in a complete stock of their goods for filling rush orders.

=The completed calender room of the National India Rubber Co., at Bristol, is wonderfully adapted to the needs of the great plant, and is a delight to the heads of departments.

=A. A. Marks (New York), the pioneer in artificial feet of sponge rubber, has brought out a new type of foot that eclipses all of his previous efforts. If he continues to invent in this line it is likely that the artificial will be superior to the natural in time.

=The cable room at the National India Rubber Co. factory, where the N. I. R. insulated wire is made, is running to its fullest capacity.

=The Norfolk Rubber Co. (Boston) are bringing out a new soft finish cravenette that is far superior to last year's hard finish goods, and just as fully rain proof.

=Mr. F. M. Hartshorne, Sec.-Treas. of the Pacific Rubber Co., was recently struck by a trolley car in Elizabeth, N. J., where his factory is situated, and had a very narrow escape. As it is he was severely bruised, but not incapacitated from business.

=The Home Rubber Co. moved into their new hose department on the first of February. The new building for this work gives them the largest and best equipped plant in Trenton.

=Schrader & Ehlers, agents for the Harburg Co., have taken larger offices and warerooms on the lower floor at 335 Broadway, New York.

=The tires of the Overman Wheel Co. were not shown at the Cycle Show. Too bad, they are as good as can be made, and should have been in evidence.

=Morgan & Wright (Chicago) are credited with a daily capacity of 13,000 single tires.

=In the face of the pronounced desire of some to make larger tires comes the announcement that the Czar Cycle Co., Chicago, have adopted a narrow tread for city riding and for racing. Their argument, which is a good one, is that equal speed can be secured and far more pedal power.

=Mr. E. H. St. John, late of the Vendome Rubber Co. (New York) is operating the Cavanaugh Rainproof Co. in the same city, making garments of the cravenette order.

=The senior Dunbar is on his way to the city of Pará to visit his son Fred, who is the resident representative of A. H. Alden & Co.

=The Marlboro Rubber Co. (Marlboro, Mass.), are to open stores at both Northeast and Northwest harbors next spring. Both will be managed by Mr. A. W. Parker.

=We are in receipt of a copy of a patent granted to Mr. Wheeler Cable, of the Cable Rubber Co., for a fish-hook that will not foul in the muddiest of waters. The patent is a good one, and from all accounts the hook is a daisy.

=The Franklin Institute of Philadelphia have awarded H. F. Neumeyer a certificate of merit for his improved spray nozzle. His advertisement in another column describes the device.

=Mr. George Street, who in 1882 was granted a patent for sewing rubber fabrics, is said to be calling upon the rubber manufacturers whom he believes to be using his process.

=Wood & Bishop (New Haven, Conn.) are the patentees of a soft rubber ear cleaner that is said to be having a very satisfactory sale.

=Mr. Kelley, New England salesman for the Home Rubber Co. (Trenton), has opened an office in the Shoe & Leather Exchange building, Boston.

=Mr. Wm. Lincoln Sage (Boston) has been elected first vice-president of the Psi Upsilon Association, and lately presided at one of their banquets, with marked success.

=The National India Rubber Co. are receiving floods of orders for tennis goods.

=The Berlin Iron Bridge Co., of East Berlin, Conn., who have done considerable work for rubber mills, have just completed a very successful year. The shipments have been the largest in the history of the company and is represented by over one and one-half million dollars worth of business. At the annual meeting of the stockholders, which was held at the office of the company on Thursday, Jan. 30, the following directors were elected: Chas. M. Jarvis, Burr K. Field, Geo. H. Sage, H. H. Peck, of Waterbury; S. H. Wilcox, of Brooklyn, N. Y.; J. W. Burr and F. L. Wilcox. At the meeting of the directors the following officers were elected: President and Chief Engineer, Chas. M. Jarvis; Vice-President, B. K. Field; Secretary, Geo. H. Sage; Treasurer, F. L. Wilcox; Manager of Highway Bridge Department, D. E. Bradley; Assistant to the President, E. W. Stearns.

=An attachment has been served against the Commonwealth Rubber Co. (New York) on a claim of $14,370, in favor of Harry Ferguson, of Brooklyn, assigned by the Home Rubber Co.

=Mr. A. J. Whistler of the Chicago Rubber Works, of the Mechanical Rubber Co. is at the head of the manufacturing at the new Kokomo Rubber Co., Kokomo, Ind.

=Mr. A. H. Yeomans, the well-known rubber buyer of the Boston Rubber Shoe Co., has returned from a three weeks' pleasure trip South.

=At the annual meeting of the Canadian Rubber Co. (Montreal) an encouraging annual report was presented, and the election of officers resulted as follows: President, Andrew Allan; vice-president, Hugh McLennan; H. M. Allan and A. Allan. Frs. Scholes, W. H. Benyon, W. Withall, Art. Prevost, J. B. Learmont, J. J. McGill, managers; E. O. Gravel, secretary-treasurer.

=The McCord Rubber Company (Indianapolis) has begun suit in the superior court to attach rubber goods to the value of $250 in the hands of O. E. Fox, a non-resident of the state, who has the property now in the city.

=The report that the National India Rubber Co. was to stop work is not verified as the mill has large unfilled orders on hand. The striking cutters are all trying to get back at the company's terms

=The new manufacturers show rooms of the Singer Manufacturing Co., at 561 and 563 Broadway, New York, should interest the whole rubber trade. Sewing machines for every process under the sun, in full operation, with experts in attendance are there, and one visit is a liberal education in that line.

=The Wales Goodyear Rubber Co. have already sold the entire product of their factory on tennis goods for the season, and are obliged to decline further orders.

=James Madison Munro, who died at Bristol, R. I., on January 12, in his eighty-fourth year, was for several years connected with the boot department of the National India Rubber Co. He was a native of Bristol.

=Erastus S. Foster, connected with the store of the Metropolitan Rubber Co. (No. 676 Broadway, New York), died suddenly on the evening of January 4 in the apartment of a friend while making a call. He was fifty-five years of age.

=The sales of stocks of the United States Rubber Co. have been unusually small since the beginning of the year. Recent quotations have been 26½ for common and 86 for preferred.

=Suit has been brought by the Bank of the Metropolis (New York) against Eberhard Faber, the pencil-manufacturer, for $1200, the amount of a note discounted for the F. J. Kaldenburg Co., now defunct, of which he was at one time a director and the treasurer. The alleged ground for the action is that Mr. Faber, while treasurer in 1892, filed a misleading report of the condition of the company. A similar report was filed by

Mr. Faber's successor in February, 1893, according to which the liabilities of the concern were placed at $285,000, while the available assets were $750,000. Upon April 8 of the same year Clarence Lexow was appointed receiver of the company, and the assets realized but about one-half of 1 per cent. for the creditors. The bank's attorney is said to represent other creditors of the Kaldenberg Company who will bring suits in case the present action should prove successful.

=The new process garden hose advertised by John E. Rhoads & Sons, of Philadelphia, is proving a very ready seller. A hose with a perfectly smooth cover and in 500 feet lengths is something so unique that it attracts attention. For full particulars consult the advertisement.

=The Singer Co., Limited, of Coventry, England, through their American manager, Mr. C. L. Ross, are said to have purchased the plant of the Pará Rubber Co., South Framingham, Mass., where they will build the Singer cycles.

=Mr. Pierce, one of the energetic traveling men of the Conant Rubber Co. (Boston), was a recent visitor at the office of THE INDIA RUBBER WORLD.

=Mr. George G. Bryant, who travels in New England for the Cable Rubber Co. is on the road again after a severe attack of typhoid fever that began last September, and kept him housed until the present time. His customers are full of congratulatory speeches, and the recipient fairly beams on his new lease of life and the appreciation of the trade.

REVIEW OF THE INDIA-RUBBER MARKET.

AS was to have been expected, the past month has shown a constant, though not heavy, decline in the quotations for crude Pará rubber. The unfavorable weather for the rubber-shoe industry continued too long for the remainder of the winter, however severe, to compensate for the resulting loss of trade, while the approach of the season for inventorying by shoe-manufacturers tends to limit their buying for stock. In view of this situation, and of the continued liberal receipts at Pará, the fact that prices have declined even more is evidence of activity in other departments of production, either actual or in early prospect. With the exception of the shoe industry and of the mackintosh production—with its comparatively small demand—there is no evidence of limited activity among the rubber-mills. On the other hand, the ever-growing tire trade seems to be entering upon an unprecedented period of development.

Centrals are quiet, and some of the cheaper sorts are reported somewhat easier. The trade in Africans is dull.

The latest quotations in the New York market are:

Pará, fine, new t a	71	@73	Benguela	45	@46
Pará, fine, old	none here		Congo Ball	36	@40
Pará, coarse, new t a	43	@52	Cameroon Ball	38	@39
Caucho (Peruvian) strip	44	@45	Flake, Ord and Lump	24	@25
Caucho (Peruvian) ball	50	@51	Accra Flake	15	@18
Mangabeira, sheet	40	@42	Liberian Flake	27	@28
Esmeralda, sausage	48	@49	Primest Pinky Madr	58	@60
Guayaquil, strip	35	@41	Madagascar, black	40	@43
Nicaragua, scrap	46	@48	Borneo	26	@40
Nicaragua, sheet	44	@45	Gutta-percha, fine grade		1.30
Thimbles	34	@35	Gutta-percha, medium		1.00
Tongues	37	@38	Gutta-percha, hard white		85
Sierra Leone	25	@42			

The statistical position of Pará rubber in New York and elsewhere is as follows, the figures expressing tons of 1000 kilograms:

	Fine and Medium.	Coarse.	Totals.	Totals 1895.	Totals 1894.
Stock, January 31	241	27 =	268	1081	639
Arrivals, January	784	345 =	1129	1291	1575
Aggregating	1025	372 =	1397	2372	2214
Deliveries, January	816	331 =	1147	1806	1285
Stock, January 31	209	41 =	250	566	929

	1896.	1895.	1894.
Stock in England, January 31	910	750	874
Deliveries in England, January	875	850	752
Pará receipts, January	3010	3425	2370
Stock in Pará, January 31	1340	1050	1377
World's supply Jan. 1 (excluding Caucho)	3627	4150	4160
Pará receipts since July 1	13,290	12,640	12,715

Regarding the market for commercial paper during the past month, Mr. Albert B. Beers says that there has been practically no demand, what little may have been taken by banks being at 7 per cent. or over, for well known strong names; the present outlook is that money is tending towards easier conditions, but there will probably be but little demand for paper for some weeks yet.

IMPORTS FROM PARA.

THE receipts of India-rubber direct from Pará and Manáos at the port of New York since our last publication are reported in detail below, the figures referring to pounds:

January 13.—By the steamer *Horatio*, from Pará:

	Fine.	Medium.	Coarse.	Caucho.	Total.
New York Commercial Co.	158,200	29,600	78,900	5,100=	271,800
Reimers & Meyer	87,300	21,400	13,600	3,200=	126,500
Otto G. Mayer & Co.	.....	6,100	54,600	.....=	60,700
Lawrence Johnson & Co	2,900	400	28,200	300=	31,800
P. Lima	4,400	700	3,700	.....=	8,800
Totals	252,800	59,200	179,000	8,600=	499,600

January 24.—By the steamer *Fluminense*, from Manáos and Pará:

New York Commercial Co.	113,500	30,300	54,500	1,000=	199,300
Reimers & Meyer	199,600	58,200	86,500	.....=	344,300
Lawrence Johnson & Co	76,700	15,000	40,200	2,100=	134,000
Joseph Banigan	31,000	14,100	23,600	.....=	68,700
C. Ahrenfeldt & Son	6,600	.. ..	23,200	19,800=	49,600
S. Green	22,200	5,600	11,300	3,500=	42,600
Otto G. Mayer & Co.	.....	6,800	19,200	.....=	26,000
P. Lima	6,800	300	7,100	.....=	14,200
George G. Cowl	3,200	400	1,400	.....=	5,000
Totals	459,600	130,700	267,000	26,400=	883,700

February 2.—By the steamer *Lisbonense*, from Pará:

Reimers & Meyer	155,600	23,300	70,300	.....=	249,200
New York Commercial Co.	40,300	5,400	17,800	7,100=	70,600
Lawrence Johnson & Co.	.....	.....	35,400	.....=	35,400
Otto G. Mayer & Co.	7,700	6,100	21,600	.....=	35,400
P. Lima	4,800	200	4,800	....=	9,800
George G. Cowl	.....	.....	9,000	.....=	9,000
Shipton Green	6,900	. ...	800	100=	7,800
Totals	215,300	35,000	159,700	7,200=	417,200

January Imports from Pará	2,718,300
January, 1895	2,869,500

PARA IMPORTS VIA EUROPE.

January 14.—By the steamer *La Champagne*, from Havre:

Otto G. Mayer & Co. (Fine)	1,400

January 16.—By the steamer *Germanic*, from Liverpool:

Otto G. Mayer & Co. (Fine)	1,600

January 31.—By the steamer *Britannic*, from Liverpool:

George A. Alden & Co. (Fine)	22,000

OTHER NEW YORK ARRIVALS.

BELOW will be found in detail the imports at New York during January, 1896, of India-rubber from Mexico, Central America, and South America, other than Pará grades; also, arrivals at New York of African and East Indian sorts:

CENTRALS.

	POUNDS.
JAN. 1.—By the *Finance*=Colon:	
New York Commercial Co.	1,800
Roldan & Van Sickle	5,019
I. Brandon & Bro.	9,573
Dumarest & Co.	3,570
W. R. Grace & Co.	2,855
G. Amsinck & Co.	2,860
Wallace, Muller & Co.	3,200
Munoz & Espriella	2,000
Flint, Eddy & Co.	1,600
Maitland, Phelps & Co.	1,200
G. R. Cottrell & Co.	360
Total	44,037
JAN. 1.—By the *Seneca*=Mexico:	
José Agostini	1,000
Graham, Hinckley & Co.	800
Hughes & Co.	200
Total	2,000
JAN. 2.—By the *Colombia*=Colon:	
Flint, Eddy & Co.	2,000
R. F. Cornwell	1,000
Lanman & Kemp	200
Total	3,200
JAN. 2.—By the *Excelsior*=New Orleans:	
Albert T. Morse	9,000
JAN. 3.—By the *El Dorado*=New Orleans:	
F. H. Robinson	5,000
JAN. 3.—By the *Regulus*=Gracias, etc:	
Eggers & Heinlein	2,000
Samper & Jimenez	1,500
K. Mandell & Co.	500
A. S. Lascelles & Co.	100
Total	4,100
JAN. 3.—By the *Grecian Prince*=Bahia:	
New York Commercial Co.	13,000
JAN. 6.—By the *Yumuri*=Tampico:	
H. Marquardt & Co.	1,000
F. Probst & Co.	200
Total	1,200
JAN. 8.—By the *Coleridge*=Bahia:	
New York Commercial Co.	5,800
Reimers & Meyer	2,200
Total	8,000
JAN. 9.—By the *Majestic*=Liverpool:	
George A. Alden & Co.—Africans.	11,400
JAN. 8.—By the *Yucatan*=Mexico:	
H. Marquardt & Co.	1,200
Hughes & Co.	1,000
Graham, Hinckley & Co.	700
L. Monjo, Jr., & Co.	200
Flint, Eddy & Co.	200
Total	3,300
JAN. 13.—By the *Panama*=Cartagena:	
D. A. de Lima & Co.	3,000
G. Amsinck & Co.	2,500
Total	5,500
JAN. 13.—By the *Alliance*=Colon:	
New York Commercial Co.	13,900
W. R. Grace & Co.	9,805
A. Santos & Co.	7,913
A. P. Strout	7,660
Munoz & Espriella	7,316
Roldan & Van Sickle	6,847
I. Brandon & Bros.	5,822
G. Amsinck & Co.	5,170
Andreas & Co.	4,060
W. Loaiza & Co.	4,015
Dumarest & Co.	3,720
Hirzel, Feltman & Co.	3,343
Flint, Eddy & Co.	2,010
Maitland, Phelps & Co.	2,000
A. M. Capen's Sons	1,997
J. M. Ceballos & Co.	1,234
G. R. Cottrell & Co.	1,218
Fermin Ferrer	1,158
Frame Alston & Co.	1,120
Elmenhorst & Co.	743
United States Commercial Co.	590
Hoadley & Co.	428
F. G. Tomas	176
S. Hermanos	69
Total	92,254
JAN. 13.—By the *Adirondack*=Port Limon:	
Aaron N. Roltholz	800
Kunhardt & Co.	200
Total	1,000
JAN. 15.—By the *El Paso*=New Orleans:	
Albert T. Morse	13,000
F. H. Robinson	10,000
W. H. Crossman & Bro.	5,000
Total	28,000
JAN. 16.—By the *Flamborough*=Belize:	
For Liverpool	600
Eggers & Heinlein	200
Total	800
JAN. 17.—By the *Carib*=Truxillo, etc.:	
Eggers & Heinlein	2,200
José Agostini	100
W. H. Peabody & Co.	200
Total	2,500
JAN. 18.—By the *Saratoga*=Vera Cruz:	
Flint, Eddy & Co.	200
JAN. 21.—By the *Bovic*=Liverpool:	
William A. Brown & Co.	600
JAN. 20.—By the *Servia*=Liverpool:	
W. A. Brown & Co.	2,500
JAN. 21.—By the *Louisiana*=New Orleans:	
George J. Worth	6,500
JAN. 22.—By the *Alleghany*=Savanilla:	
For London	10,000
JAN. 22.—By the *El Dorado*=New Orleans:	
Albert T. Morse	1,000
JAN. 22.—By the *Seguranca*=Tuxpan:	
H. Marquardt & Co.	200
JAN. 25.—By the *Advance*=Colon:	
I. Brandon & Bro.	6,105
Piza, Nephews & Co.	2,384
George R. Cottrell & Co.	1,450
Maitland, Phelps & Co.	1,000
Ellinger Bros.	438
J. Aparicio & Co.	169
Total	11,546
JAN. 28.—By the *Alba*=Cartagena:	
D. A. De Lima & Co.	3,000
JAN. 11.—By the *Paris*=Southampton:	
Reimers & Meyer	2,100
JAN. 30.—By the *City of Washington*=Mexico:	
Thebaud Bros.	1,000
C. Viadero	500
Total	1,500
JAN. 30.—By the *El Rio*=New Orleans:	
Albert T. Morse	15,000
W. H. Crossman & Bro.	5,000
F. H. Robinson	2,000
Total	22,000
Total Centrals for January	339,937
Total for January, 1895	341,029

AFRICANS.

	POUNDS.
JAN. 3.—By the *Britannic*=Liverpool:	
George A. Alden & Co.	11,300
JAN. 5.—By the *Etruria*=Liverpool:	
Reimers & Meyer	11,000
George A. Alden & Co.	8,800
Boston Rubber Shoe Co.	6,000
Total	25,800
JAN. 6.—By the *Phœnecia*=Hamburg:	
Reimers & Meyer	3,000
JAN. 9—By the *Majestic*=Liverpool:	
George A. Alden & Co.	10,300
JAN. 11.—By the *Paris*=Southampton:	
George A. Alden & Co.	12,000
JAN. 12.—By the *Aurania*=Liverpool:	
George A. Alden & Co.	31,100
Reimers & Meyer	4,000
Total	35,100
JAN. 16.—By the *Germanic*=Liverpool:	
George A. Alden & Co.	14,300
JAN. 20.—By the *Servia*=Liverpool:	
George A. Alden & Co.	5,100
JAN. 21.—By the *Bovic*=Liverpool:	
W. A. Brown & Co.	10,000
JAN. 23.—By the *Teutonic*=Liverpool:	
Reimers & Meyer	9,360
JAN. 25.—By the *Campania*=Liverpool:	
George A. Alden & Co.	26,000
Amerman & Patterson	11,000
Total	37,000
JAN. 25.—By the *St. Paul*=Southampton:	
Windmuller & Roelker	8,000
JAN. 26—By the *Palatia*=Hamburg:	
George A. Alden & Co.	4,500
Reimers & Meyer	16,000
Total	20,500
JAN. 30.—By the *Devenum*=Lisbon:	
George A. Alden & Co.	158,000
Otto G. Mayer & Co.	44,000
Reimers & Meyer	11,000
Total	213,000
JAN. 31.—By the *Britannic*=Liverpool:	
George A. Alden & Co.	15,000
Total Africans for January	424,800
Total for January, 1895	582,000

EAST INDIAN.

	POUNDS.
JAN. 13.—By the *Massachusetts*=London:	
Reimers & Meyer—Pontianak	40,000
JAN. 17.—By the *St. Louis*= Southampton:	
O. G. Mayer & Co.	7,400
JAN. 24—By the *Italia*=Hamburg:	
Amerman & Patterson	8,000
JAN. 26.—By the *England*=London:	
Reimers & Meyer	10,000
Reimers & Meyer—Pontianak	250,000
Total	260,000
Total East Indian for January	315,400
Total for January, 1895	28,800

RECAPITULATION.

	POUNDS.
Pará—direct imports	2,718,300
Pará—via Europe	25,000
Centrals	339,937
Africans	424,900
East Indian	315,400
Total at New York for January	3,823,537
Total for January, 1895	4,038,229

BOSTON ARRIVALS.

	POUNDS.
JAN. 4.—By the *Bostonian*=London:	
Geo. A. Alden & Co.—Jelotong	33,600
JAN. 11.—By the *Angloman*=Liverpool:	
Geo. A. Alden & Co.—Africans	2,490
JAN. 15—By the *Sylvania*=Liverpool:	
Reimers & Meyer—Africans.	200
JAN. 17.—By the *Borderer*=London:	
Geo. A. Alden & Co.—East Indian	1,500
W. H. Crossmans—Centrals	1,800
JAN. 22.—By the *Sagamore*=Liverpool:	
Reimers & Meyer—Africans.	14,000
JAN. 30.—By the *Lord Erne*—London:	
Geo. A. Alden & Co.—Africans	8,900
Geo. A. Alden & Co.—East Indian	870
Reimers & Meyer.—Africans	9,500
Total	72,860

NEW ORLEANS.

	POUNDS.	VALUE.
Nicaragua	72,387	$27,433

VASELINE AND RUBBER.

IN an interesting conversation with the clever inventor of the Bagot valve, that gentleman made a statement which sounds somewhat heretical in the ears of an average cyclist, but which, if Mr. Bagot is not mistaken, shows a valuable relation between the best vaseline and rubber. Mr. Bagot tells us he has found that the best vaseline has no deleterious effect upon rubber whatsoever, and that he has used it with the best results in connection with the preservation of the large rubber valve pad in the Bagot valve. This fact, if correct, is so important to cyclists that we should be glad to hear from a rubber expert on the subject.—*Cyclist.*

[The fact that petroleum products are largely used by rubber manufacturers is well known. They are not, however, used in a hap-hazard manner. The only office of crude petroleum or of vaseline in any form is to soften an otherwise stiff and intractable compound. If the Bagot valve is heavily compounded or is overcured, or is of a compound that oxidizes readily after cure, vaseline certainly may keep it soft. At the same time the indiscriminate use of it or of any oil, mineral or animal by the "average cyclist" is to deprecated. The most expert rubber manufacturers knowing all about the crude rubber, the compounds used, and the vulcanization, are careful how they use it. —THE EDITOR.]

PARA EXPQSITION POSTPONED.

[OFFICIAL DECREE].

THE governor of the state of Pará having resolved to enlarge the scope of the agricultural, artistic, and industrial exposition to take place in this city, and an invitation to which has been extended to all the states of the Brazilian union, and to the federal district itself, thus forming a national exposition, and considering that this enlargement demands a greater space of time for the work of organization and that a shorter space would be equally inconvenient for the states recently invited, it is resolved, in conformity with the opinion of the directory commission to postpone the opening of the exposition to the 15th day of November, 1897, its termination being February 1, 1898. LAURO SODRE,

Belem (Pará), November 30, 1895. Governor.

A RUBBER BALL PUMP.

APPLICATION has been made for a patent on a mechanical invention which bids fair to be of great value to wheelmen. It is an automatic pump for pneumatic tires. It consists of a rubber ball placed within the tire with a check-valve both in and outside. The ball is held in place by small wire coils. The pressure ou the ball while riding forces air into the tire, and when sufficiently full it will stop. It does away with pumps, and when a puncture occurs supplies a constant injection of air into the tire as you ride.—*The Hardware Dealer.*

A NEW DEPARTURE IN CRAVENETTES.

IN the past the special fault with the cravenette garment has been that it appeared only in blacks and blues and those of rather indifferent shades. The Coronado Rubber Co. (New York), however, have, as leaders for their spring trade, the same goods in brown with blue backs, a very handsome combination of blue and old gold, and a variety of beautiful plaids. The goods are reversible, and so woven that they have every appearance of handsome, light weight double textures.

Ad Rub. scrap.

Free Want Department.

RUBBER BOOKS.—A very fine collection of old publications on India-rubber and Gutta-percha for sale cheap. Address KNOWLES in care of this paper. (Feby.)

WANTED.—Position by a competent and experienced man as foreman or superintendent with a rubber company. Experienced in mixing compounds and can furnish the same for the manufacture of friction tape, clothing, tubing, mechanical goods, and insulating wire. Address "M. O'C.," care INDIA RUBBER WORLD. (Feby.)

WANTED.—Position in rubber mill by a man well acquainted with mechanical goods, hose, belts, packing, insulated wire, and clothing of all kinds. Capable superintendent or foreman of department. References. Address, E. E. A., care INDIA RUBBER WORLD. (Feby.)

FIRST-CLASS machinist would like employment with a bicycle tire concern. Four years with last employer; first-class references. Address, "Tire," care INDIA RUBBER WORLD. (Feby.)

RUBBER BELT MAKER.—Wanted a first-class belt maker. One who understands the business thoroughly and can take position as foreman of belt room; who can make his own estimates and is a first-class man in all respects. Give references, experience, and all particulars. Address, "Belt," care INDIA RUBBER WORLD. (Feby.)

COMPETENT and experienced man desires to make a change. Fully able to superintend the manufacture of druggists' sundries, or would take a position as calender man. Address, "Sundries," care of INDIA RUBBER WORLD. (Feby.)

WANTED.—A man used to compounding and running sheet-packing. Only first-class man need apply. State where last employed and what wages are wanted. Address E. P. W., care of THE INDIA RUBBER WORLD. (Jan.)

WANTED.—Mackintoshes or line of rubber specialties to sell the jobbing and retail trade of Iowa, Nebraska, and Colorado. Acquaintance of 15 years in territory. Success guaranteed. Have sold nine thousand dollars in Mackintoshes to retail trade of Iowa in six days. Commission or salary. Address M. L. D., No. 676 W. 14th St., Des Moines, Ia. (Jan. 2t.

WANTED.—A man competent to take charge of mill room who understands compounding and mixing tire stock. Address giving experience, etc., New Brunswick Rubber Co., 88 Reade St., N. Y. (Jan.)

WANTED.—A position as foreman in a mechanical rubber works. Have had 31 years experience in this line of business. Have been a superintendent and foreman in the mechanical department of the N. I. R. Co. for 27 years, also had charge of the vulcanizing of all goods in the druggists and sundry epartments. Address S. L. B., Lock Box 121, Bristol, R. I. (Jan.)

WANTED.—Half dozen good packing salesmen for the New England States, to handle a first class packing exclusively on commission, or as side line. Must be familiar with the business. Liberal commission. Good man can make big money. Address Packing, care INDIA RUBBER WORLD. (Dec.)

WANTED.—Experienced mechanical rubber goods salesman to sell cotton rubber lined fire hose under unusually advantageous conditions, in New York and the New England States. Address, fully, stating experience, and compensation required, E. H. S., care INDIA RUBBER WORLD. (Dec.)

WANTED.—Position in a rubber factory by a man well acquainted with the manufacture of mechanical rubber goods, such as carriage drills, druggists' sundries, white sheetings, etc. Capable superintendent or foreman of department. References. Address, H. B. C., care of INDIA RUBBER WORLD. (Dec.)

WANTED.—Position by traveling man 42 years old, well acquainted with mechanical rubber goods, and some knowledge of druggists' rubber goods. Good references as to character and ability. Prefer traveling for a factory. Address P. D., care of INDIA RUBBER WORLD. (Dec.)

A COMPETENT MAN of 25 years' experience in the manufacture of boot and shoe stock, bicycle tires and mechanical rubber goods generally, desires to make a change from present position. Fully competent to take charge of mill room. Address COMPETENT, care of INDIA RUBBER WORLD. (Dec.)

WE WANT to buy a second-hand heater 12 x 3, with truck. Give particulars. Address Heater, care of INDIA RUBBER WORLD. (Dec.)

A RUBBER boot and shoe salesman having the acquaintance of the jobbing trade generally, and the retail trade in and about New York, desires a position wherein his services could be made available. Address M., care of INDIA RUBBER WORLD. (Dec.)

SALESMAN identified with manufacturer of bicycle tires, thoroughly acquainted with the trade in New York and New England, desires a position with manufacturer or jobber wherein services could be of value. Address J., care of INDIA RUBBER WORLD. (Dec.)

WANTED.—A young man with experience to superintend the druggist sundry department in a large rubber manufactory. Only capable men need apply. Address Rubber Superintendent, care of INDIA RUBBER WORLD. (Nov.)

YOUNG MAN, technical graduate, several years' experience in rubber work, desires position as chemist in rubber works. Would accept position in other capacity. Excellent references. C. E., care of INDIA RUBBER WORLD. (Nov).